NOVEMBER 1, 1958

TELEPHONE ENGINEER & MANAGEMENT

the telephone industry magazine

The "TE&M" Editorial
"Bad News For Louisiana Subscribers"
page 17

Gazing In The Traffic Crystal Ball
By Jack C. Cluen
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Directories show more profit

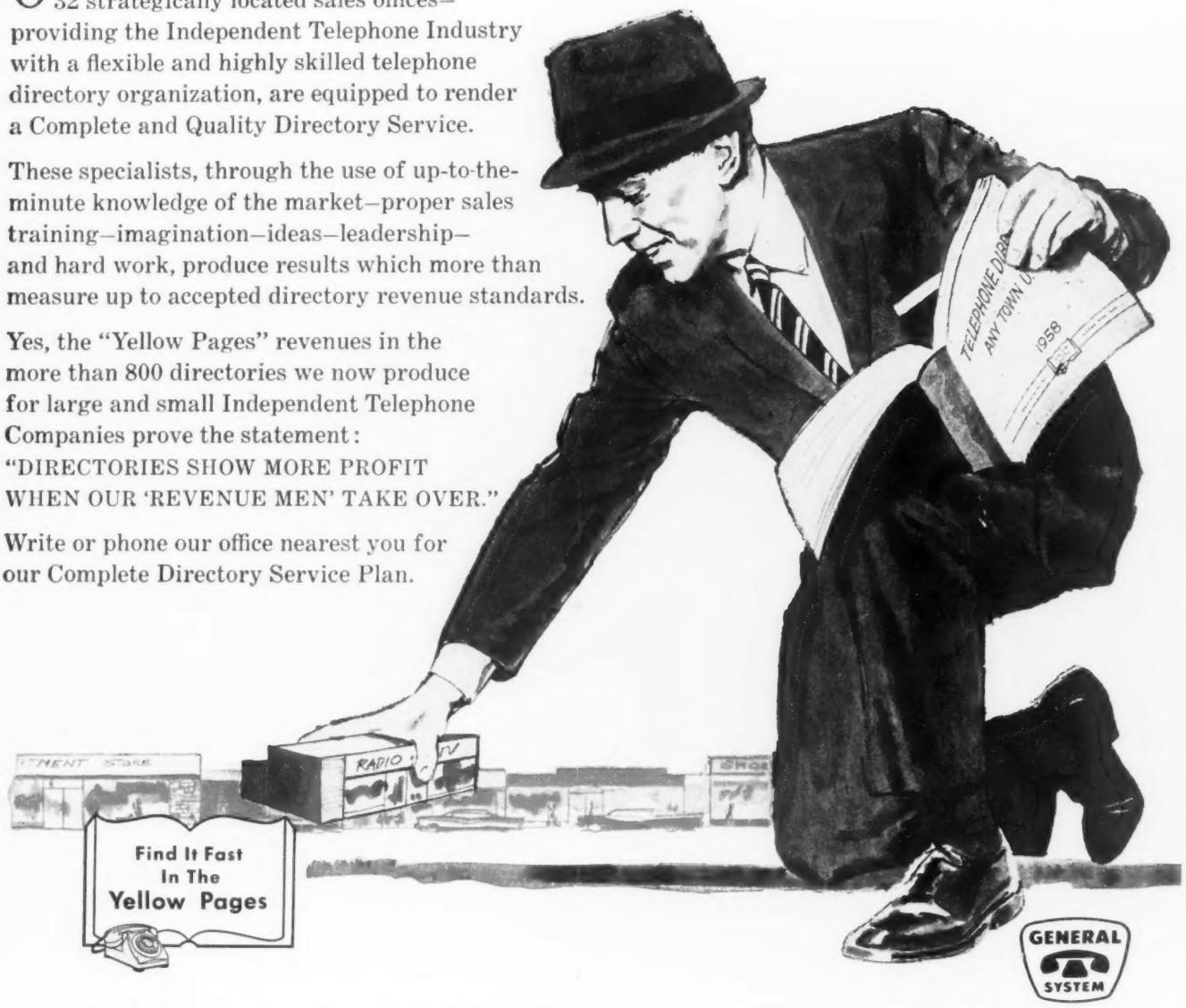
when our "Revenue Men" take over

OUR DIRECTORY "Revenue Men"—working from 32 strategically located sales offices—providing the Independent Telephone Industry with a flexible and highly skilled telephone directory organization, are equipped to render a Complete and Quality Directory Service.

These specialists, through the use of up-to-the-minute knowledge of the market—proper sales training—imagination—ideas—leadership—and hard work, produce results which more than measure up to accepted directory revenue standards.

Yes, the "Yellow Pages" revenues in the more than 800 directories we now produce for large and small Independent Telephone Companies prove the statement: "DIRECTORIES SHOW MORE PROFIT WHEN OUR 'REVENUE MEN' TAKE OVER."

Write or phone our office nearest you for our Complete Directory Service Plan.



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SHOWS YOU HOW TO MAKE PAYSTATIONS PAY-OFF IN YOUR TOWN!

This new 16-page book gives you valuable tips on placement, maintenance and promotion of paystations in your community. Includes facts and figures on 10 independent telephone companies who consistently earn extra money through the use of new techniques for developing paystation business. Contains complete information on Automatic Electric paystations and paystation accessories. Write for your free copy of this fact-packed reference book. Just fill out the coupon below and mail today.

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NORTHLAKE, ILLINOIS

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Gentlemen:

Please rush me a copy of your new Paystation Catalog.

MY NAME IS _____
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COMPANY NAME _____

STREET ADDRESS _____

CITY _____ **ZONE** _____ **STATE** _____

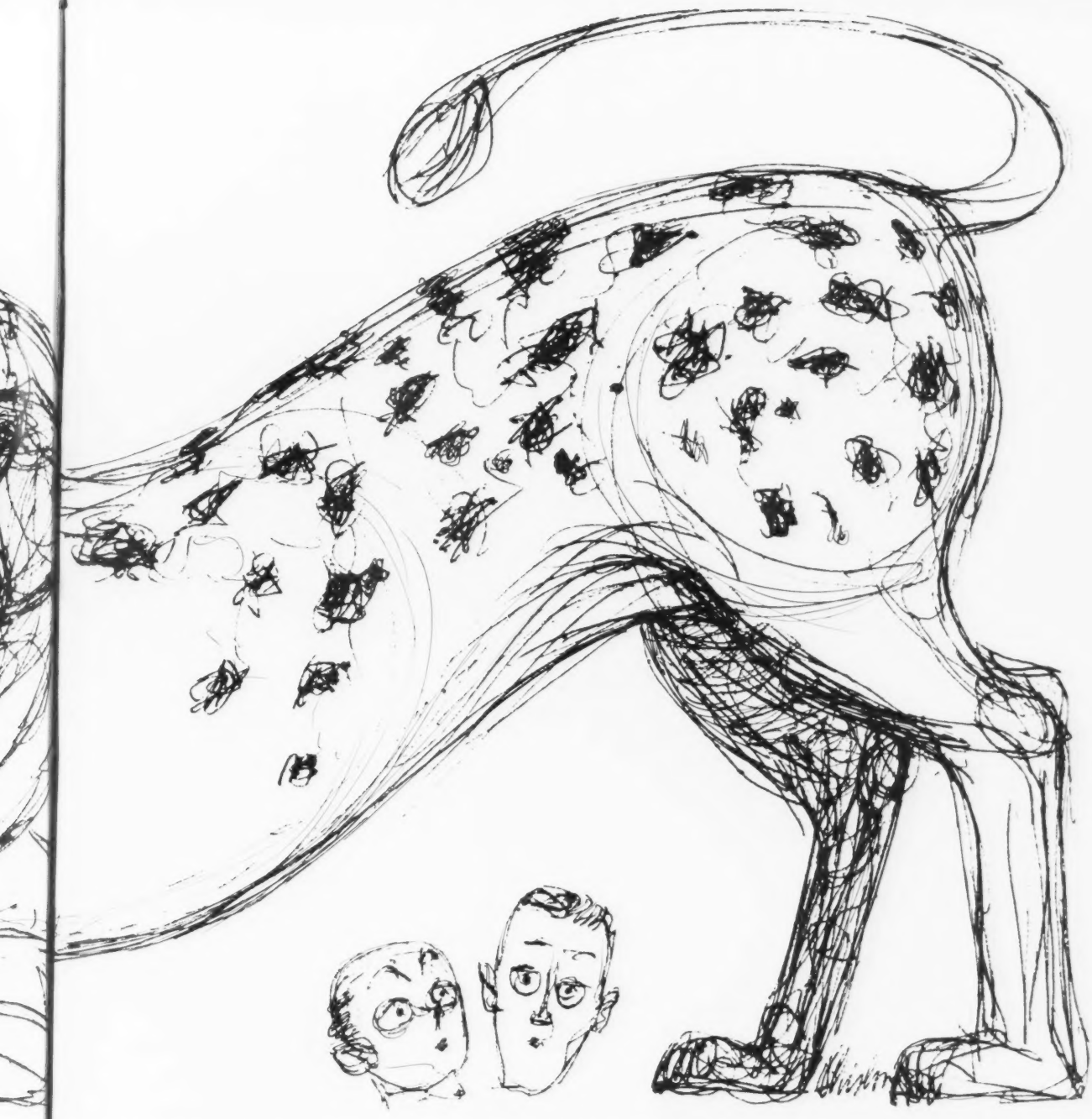
BOTH HIS FATHER AND MOTHER WERE THOROUGH-BREDS . . .

Just because a dog has a pedigree a mile lo[ng] we doesn't mean he will be the world's best flush[ing] import of game, retriever of ducks, or worthy compa[nion] se. to ion for your children. The proof of the dog [is] and in his performance.

We find the same situation in our busines[s] very h selling telephone supplies and construct[ion] heape materials. Naturally we sell famous brands m[ore] 00 pe

LEICH

Subsidiary of GENERAL TELEPHONE



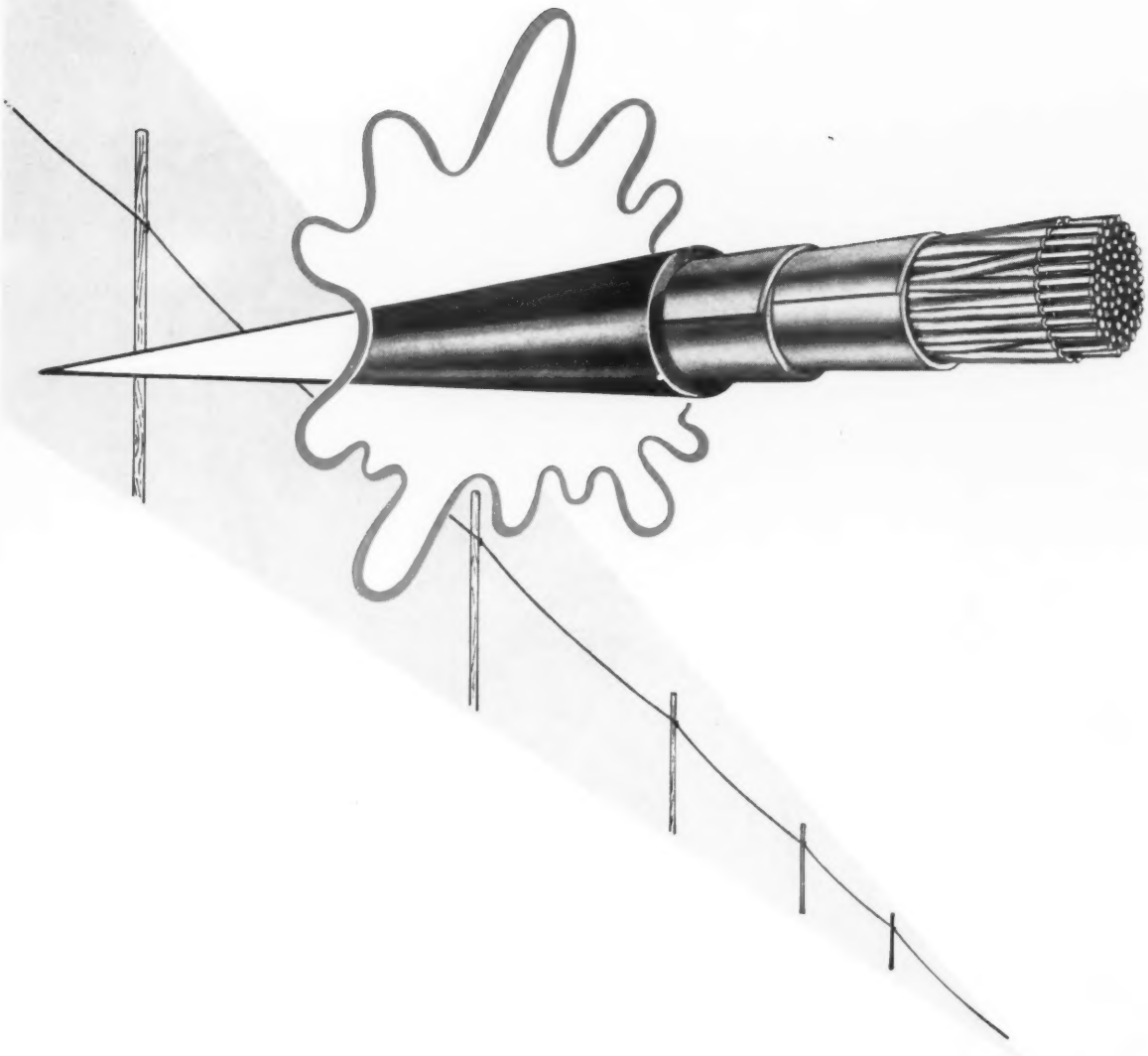
well-known companies. But . . . even more important . . . we always try to see the product in use, to have it proved in service before we offer and recommend it to you.

In the telephone business as in no other, the highest quality tools and materials are the cheapest ones you can use. We don't always score 100 percent—but you can be sure, for the most part, the telephone supplies you obtain from Leich have been tried and tested in the field, and have proved their ability to get your jobs done right—the first time.

Our friends and customers don't come to us for "deals". They rely upon us for the highest quality materials which they find are really the best buy.

We'd like very much to serve you. How about it?

LEICH SALES CORPORATION • 427 WEST RANDOLPH STREET • CHICAGO 6, ILLINOIS
PACIFIC COAST: 11401 WEST PICO BLVD., LOS ANGELES 64, CAL. SOUTHWEST: 1227 SLOCUM ST., DALLAS 7, TEX. SOUTHEAST: 5126 SOUTH LOIS ST., TAMPA 11, FLA.
manufacturers of telephones, switchboards and related apparatus since 1907



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EXCHANGE AREA CABLE
TO REA PE-22 SPECIFICATIONS
FOR AERIAL & DUCT SERVICE

FOR INFORMATION ON OUR
COMPLETE LINE OF PLASTIC
INSULATED TELEPHONE WIRE
AND CABLE — WRITE FOR
NEW CATALOG

THE REX CORPORATION — West Acton, Massachusetts

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TELEPHONE ENGINEER & MANAGEMENT

the telephone industry magazine

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FRONT COVER

At the recent USITA Convention, W. C. Kea, general commercial manager of the Hawaiian Telephone Co., Honolulu appeared on the Commercial Conference program and brought warm greetings to U. S. telephone men and women from the group shown on TE&M's front cover — Hawaiian Tel. Co. service representatives who were business office sales leaders in August.

Volume 62, No. 21. Published on the 1st and 15th of each month by TELEPHONE ENGINEER PUBLISHING CORP., 7720 Sheridan Road, Chicago 26, Ill. Telephone — Rogers Park 4-3040.
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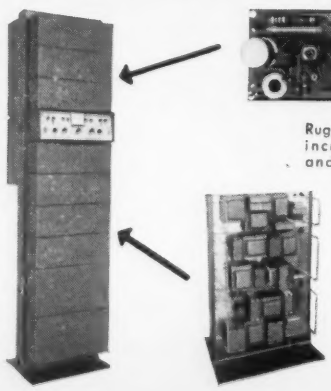
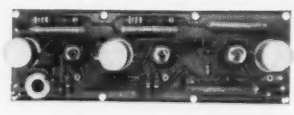
POSTMASTER . . . Please send form 3579 to TELEPHONE ENGINEER & MANAGEMENT, 7720 N. Sheridan Rd., Chicago 26, Ill.

Telephone service that laughs at any weather!

NEW PHILCO CLR-9 MICROWAVE STATION

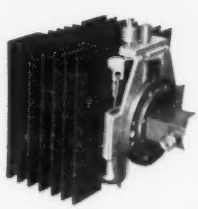


The CLR-9 terminal consists of wave-guide assemblies, master control, tubeless power supplies and plug-in chassis for IF assembly, baseband drop, modulator, reflector control and servo.



Rugged printed wiring panels increase circuit stability and simplify maintenance.

Heavy-duty, tubeless power supplies increase reliability by employing semiconductor rectifiers—assures maximum reliability and minimum maintenance.



Heat sinks cool the Klystrons by convection—gear drive assembly permits precise Klystron tuning.

Philco CLR-9 Microwave delivers 240 voice channel capacity on a single wide band path!

New Philco CLR-9 Microwave "building block" systems provide for easy expansion of toll circuits on major and subsidiary routes. Here is system economy of installation, operation and maintenance far surpassing other methods of transmission. CLR-9 microwave is engineered for absolutely reliable, unattended station operation . . . not susceptible to extremes of weather.

Philco's new CLR-9 microwave equipment provides high channel density, duplex communications with integrated standby facilities for maximum system reliability. It is designed for quick installation in standard relay racks . . . and engineered with built-in metering and test facilities plus plug-in chassis for easy field maintenance.

Performance reliability is sharply increased in the new CLR-9 by the use of tubeless power supplies—new semiconductor rectifiers replace tubes. The use of printed wiring panels increases circuit stability—and complete plug-in chassis may be quickly removed by maintenance personnel (permits efficient, centralized depot maintenance). Klystrons in the new CLR-9 are cooled by convection . . . the use of compact heat sinks eliminates the need for bulky blowers.

Plus Philco's Complete Turnkey Services— which include . . . *site surveys* by competent survey engineers experienced in field techniques; *system planning* by Philco's systems engineers who design your complete communications system; *installation* of your microwave system by Philco field engineers—including erection of towers and shelters; and, Philco field engineers are available for *field service*—periodic inspection and preventive maintenance—to maintain the highest standards of system performance.

For more economical and reliable facilities for large circuit groups . . . specify Philco microwave.

At Philco, opportunities are unlimited in electronic and mechanical research and engineering. Look ahead . . . and you'll choose Philco.

PHILCO®

GOVERNMENT & INDUSTRIAL DIVISION

4710 Wissahickon Ave., Philadelphia 44, Pa.

In Canada: Philco Corporation of Canada Limited, Don Mills, Ontario

AUTOMATIC ELECTRIC HAS THE RIGHT SUPPLIES FOR YOUR OPERATIONS!

Buying the right supplies is a real problem for independent telephone companies. Some supplies give plenty of headaches soon after delivery. Others give years and years of trouble-free performance. How can you tell the difference? How can you be sure that the brand you buy will deliver all the quality you need?

One sure way to insure quality is to rely on a famous brand name that stands squarely behind its product. Another way is to buy from a dependable supplier. You use both methods when you buy FAMOUS BRANDS from AUTOMATIC ELECTRIC.

Automatic's supply service provides a complete line of equipment for you to choose from . . . Pole Line Hardware . . . Cable & Wire . . . Large & Small Tools . . . Protective Equipment and many other items. And Automatic really shines when it comes to delivery. In most cases, your order is picked from stock and shipped the same day.

Shown here is one of our many supply items—it should fit nicely into *your* operations.

Automatic's Five Friendly Warehouses:

2915 Moore St.
Richmond 21, Va.
Elgin 8-9280

158 Corliss Avenue
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Binghamton 7-8507

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HArrison 1-4720

Northlake,
Illinois
Fillmore 5-7111

2360 N. W. Quimby St.
Portland 10, Ore.
CApital 3-7244

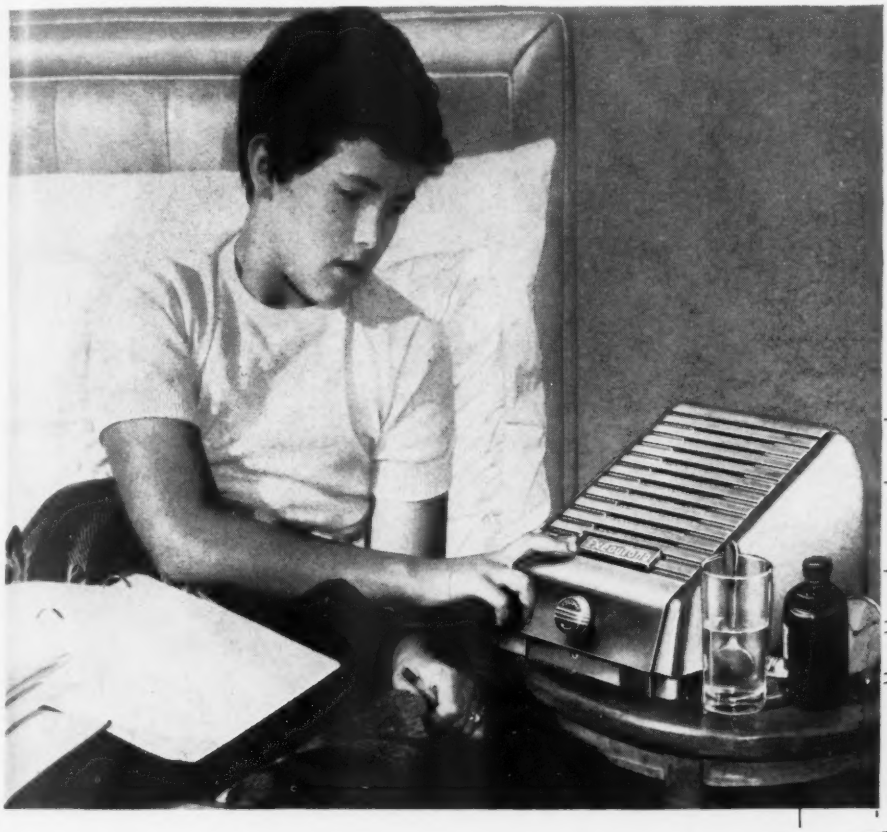
She "goes t

Executone®

NEW SCHOOL-TO-HOME SYSTEM FOR SHUT-IN STUDENTS!

Here's how to provide a real service to your community—and build strong customer relations as well. It's the Executone School-to-Home System! Executone gives your company and the school favorable publicity at no cost. It is estimated that one out of every 300 school age children is hospitalized or shut-in. Through this unique telephone system, the shut-in child can now be instructed at home—with a very simple hookup. A direct telephone line makes two-way communication possible between the home (or hospital)

to School by Telephone!



and the school classroom.

Executone School-to-Home equipment consists of a compact amplifier and microphone-speaker for the student, an amplifier unit for the school and a portable classroom station.

You can supply the Executone School-to-Home System to your community's schools, at modest cost. For complete information, call your Automatic representative or your nearest A. E. Sales Corporation warehouse.

AUTOMATIC ELECTRIC

Subsidiary of **GENERAL TELEPHONE**

NORTH HANDS PUT MORE "SERVE" IN YOUR TELEPHONE SERVICE

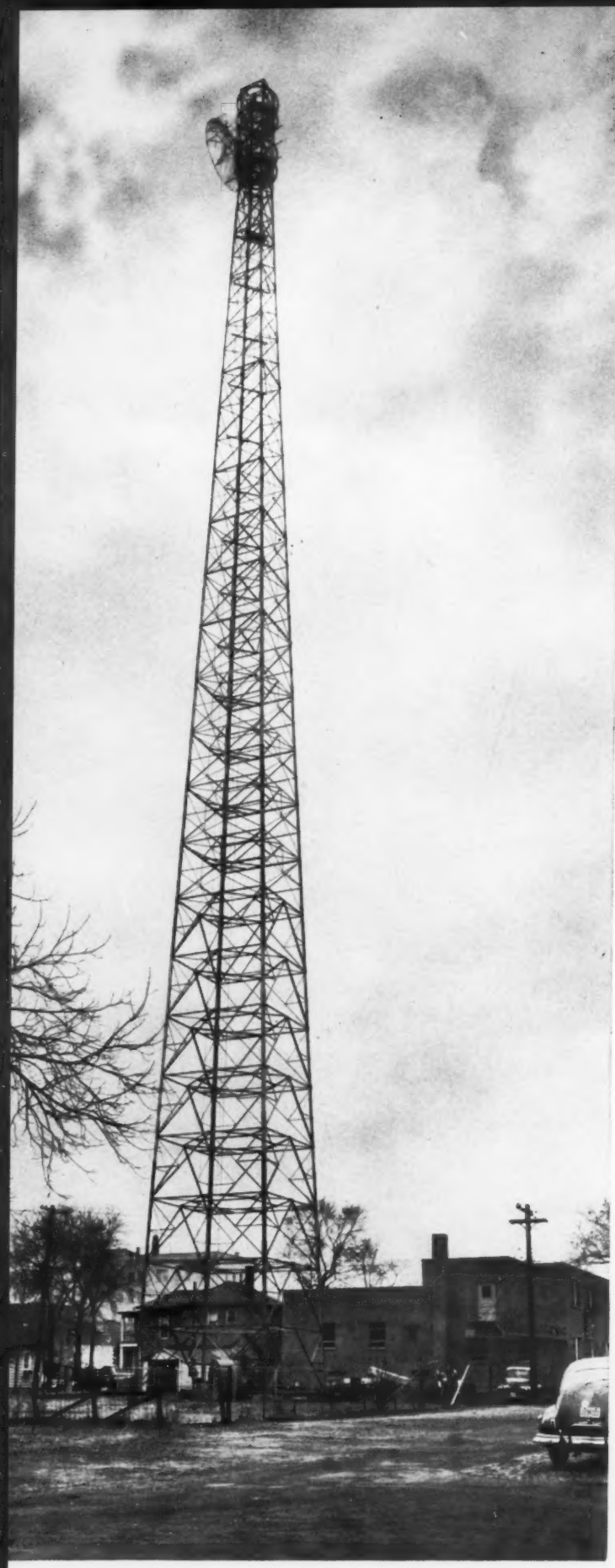
In your exchange, the "service" is the switching equipment.
North By-Path Crossbar switching equipment is the finest in the world—no other system has all the features engineered into North By-Path Crossbar!
North By-Path Crossbar puts more "serve" into your telephone service than any other switching equipment!
To the subscriber, the Ericofon is the personification of service.
The Ericofon is the most modern, beautiful, convenient and most wanted telephone instrument in the world!
Now, with the first transistorized electronic tone signal in the world the Ericofon is the only instrument as modern as the service it represents!
All North equipment is engineered and built to put real "serve" into your telephone service.
Behind every piece of North equipment lies the background and experience of 75 years—75 years of leadership that have developed North into

the dynamic force in the telephone industry

NORTH ELECTRIC COMPANY

NORTH

GALION, OHIO



This 300 foot self-supporting tower, located at the rear of new central office building, requires minimum space. Tower design meets rigid standards for safety, wind loading and quality of construction.

Signalling between Marion and Harrisburg this dish is mounted for 360 degree orientation . . . is easily positioned for any future change in signal path. Ring mounts will also simplify installation of additional antennas as the system grows.

at Marion, Illinois . . .

General Telephone goes microwave with a Blaw-Knox tower

In extending their toll system and converting to customer intertoll dial operation, General Telephone of Illinois chooses microwave as the cost cutting answer to today's needs, tomorrow's expansion.

Like so many companies in the General Telephone system turning to microwave, they chose a Blaw-Knox tower. And Blaw-Knox, for over 40 years, has been building towers that keep pace with the future. This tower, like all Blaw-Knox towers for communications, is tailored to *established* specifications, built to *individual* needs.

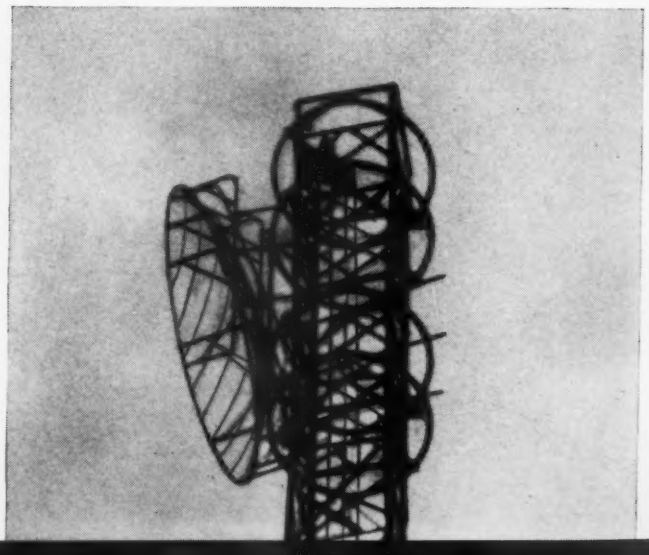
Blaw-Knox's Microwave Tower Booklet covers the unique advantages of microwave service, and outlines a complete service that ranges from tower design through fabrication and erection. Write for Booklet 2538.

Microwave Towers—guyed and self-supporting towers for microwave, AM, FM, TV, radar and communications . . . transmission towers . . . parabolic antennas . . . special structures.

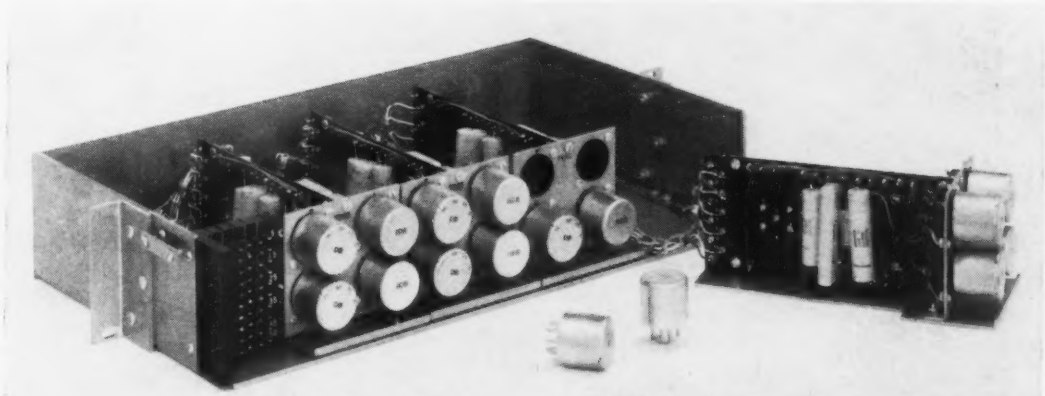
BLAW-KNOX COMPANY

Equipment Division • Pittsburgh 38, Pennsylvania

BLAW-KNOX



Now Miniaturized! Kellogg K-840 4-Wire Terminating Equipment



Units can be extended from the shelf without interrupting service.

SAVES 75% IN SPACE! The new miniaturized K-840 four-wire terminating equipment now offers two big advantages. It meets the high balance requirements necessary for operation of high grade toll circuits, and it takes up only one-quarter of the space used by older equipment.

In addition, the new K-840 permits operation of signaling trunk circuits without affecting the balance of associated voice frequency circuits. Hence it is ideal for use in two-wire switching offices where a 27 db balance or better must be maintained.

The K-840 incorporates the most advanced design techniques, modern production methods and high-quality components to provide a nearly constant two-wire impedance across the voice frequency band. Four units in a shelf occupy only 3½" of vertical space on a 19" rack. A plug-in rotatable pad provides fine attenuation adjustments for losses in ¼ db. steps up to 1 db. A second pad is selected for coarse 1 db attenuation adjustments.

Ask your Kellogg representative to explain all the advantages of this versatile low cost equipment.

Kellogg Switchboard and Supply Company, 6650 South Cicero Ave., Chicago 38, Illinois. Communications Division of International Telephone and Telegraph Corporation.

KELLOGG Communications Division of IT&T
CHICAGO, ILLINOIS

Regional Offices and Warehouses:

CALIFORNIA
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Burlingame, Calif.
OXford 7-5780
TWX SAN MATEO CAL 06

GEORGIA
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Atlanta 18, Georgia
SYcamore 4-2441
TWX AT 351

ILLINOIS
4600 So. Tripp Ave.
Chicago 32, Illinois
CLiffside 4-4300
TWX CG 3296

KANSAS
7th & Sunshine Road
Kansas City 15, Kansas
MAyfair 1-4418
TWX KC KAN 1055

MINNESOTA
6100 Excelsior Blvd.
Minneapolis 16, Minn.
West 9-6715
TWX MP 1195

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Passaic, New Jersey
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Mansfield, Ohio
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RIverside 7-5191
TWX DL 02

EXPORT –165 Prospect Street, Passaic, New Jersey, PRescott 3-5100, TWX PAS 1067

WHITNEY BLAKE

Telecable®

INSIDE WIRING CABLE

Available in Brown or Ivory Jacket in 22 and 24 A.W.G. from 6 to 76 pairs. WB Inside Wiring TELECABLE offers many advantages including:

- Light weight for easy installation
- Moisture resistance for damp ducts
- Plastite insulation resists crushing
- Easily pulled when installing in ducts
- Unaffected by humidity
- Easy to terminate
- Full color-coded insulation assures lasting polarity identification
- Jacket is tough, flame and abrasion resistant
- Steel rip wire makes stripping easy
- Permanently marked with gage and number of pairs

INDEPENDENT

WB

5-8

WELL BUILT WIRES SINCE 1899

WHITNEY BLAKE COMPANY

NEW HAVEN 14, CONNECTICUT

coming

CONVENTIONS

SOUTH CAROLINA Telephone Association, Clemson House, Clemson, Nov. 5-6, 1958.

OKLAHOMA Telephone Association, Huckins Hotel, Oklahoma City, Nov. 5-6, 1958.

ALABAMA - MISS. Telephone Association, Thomas Jefferson Hotel, Birmingham, Ala., Nov. 10-11, 1958.

GEORGIA Telephone Association, Gen'l Oglethorpe Hotel, Savannah, Nov. 12-13, 1958.

SOUTH DAKOTA Telephone Association, Marvin- Hughitt Hotel, Huron, S. D., Nov. 13-14, 1958.

FLORIDA Telephone Association, Soreno Hotel, St. Petersburg, Dec. 4-5, 1958.

MINNESOTA Telephone Association, Leamington Hotel, Minneapolis, Feb. 15-18, 1959.

TEXAS Telephone Association, Hilton Hotel, San Antonio, March 2-4, 1959.

KENTUCKY Telephone Association, Phoenix Hotel, Lexington, March 3, 1959.

IOWA Independent Telephone Association, Hotel Fort Des Moines, Des Moines, April 7-8, 1959.

OHIO Independent Telephone Association, Deshler Hilton Hotel, Columbus, April 13-15, 1959.

NEBRASKA Telephone Association, Hotel Cornhusker, Lincoln, Apr. 21-22, 1959.

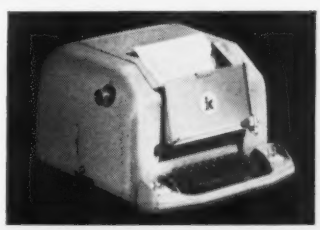
NEW YORK Telephone Association, Scaroon Manor, Schroon Lake, June 15-17, 1959.

Communications keyed to the jet age

At U. S. Air Force bases of operation, Kleinschmidt page printers and reperforator teletypewriters receive and transmit printed messages at speeds up to 100 words per minute.

Instant and precise communications between Air Force bases is a prime requisite in this era of supersonic speeds. To meet this essential need, Kleinschmidt teletypewriters and related equipment, developed in cooperation with the U. S. Army Signal Corps, provide fast transmission and receipt of printed communications. There is no time-lag for interpretation, no chance of misunderstanding, since both sender and recipient have identical printed originals . . . instantly.

Research and development of equipment for transmitting and receiving printed communications has been a continuing project at Kleinschmidt for almost 60 years. This unparalleled store of experience, now joined with that of Smith-Corona Inc, holds promise of immeasurable new advances in electronic communications.



Model 150 Page Teleprinter
Transmits and receives teleprinted messages at pre-set speeds of 60, 66, 75 or 100 words per minute. Uses roll or fanfold paper. "Semi-rev" operation, whereby shafts rotate only a half-revolution, reduces maintenance, prolongs life of unit.

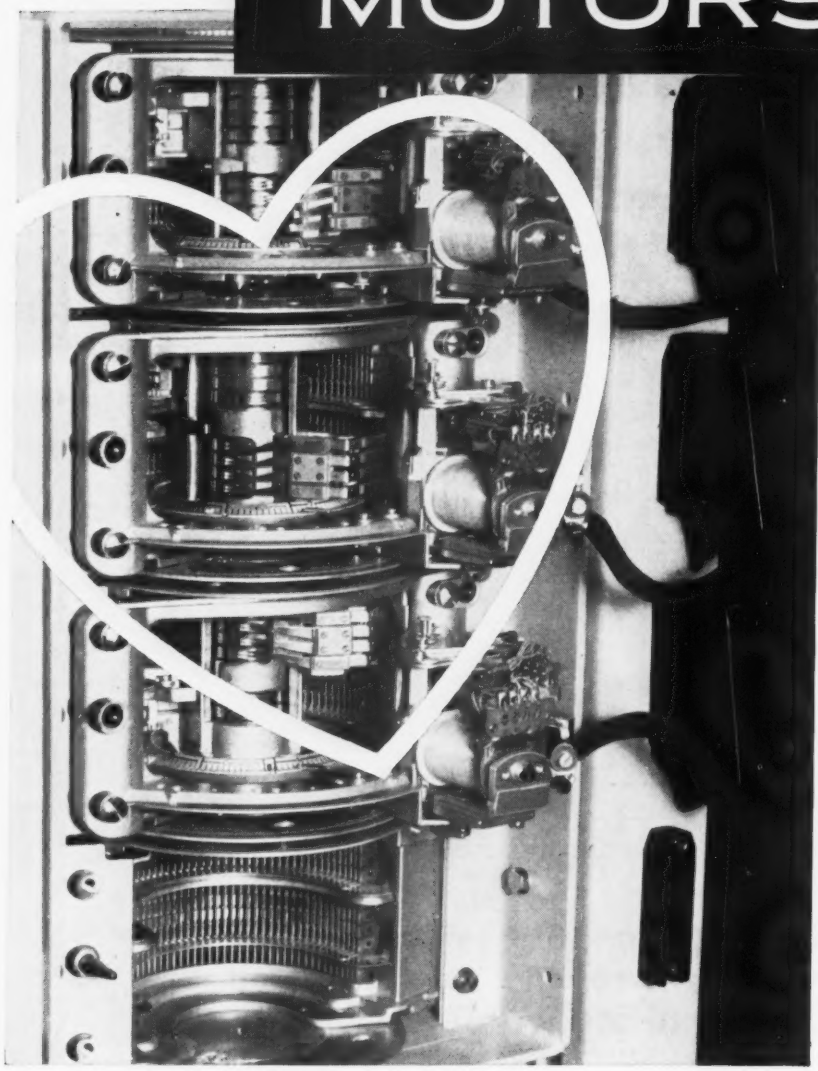
Model 120 Typing Reperforator—Tape Transmitter
This versatile unit receives and transmits messages in perforated tape form and permits reproduction, editing and preparation of tape, as well as manual keyboard transmission.

KLEINSCHMIDT

DIVISION OF SMITH-CORONA MARCHANT INC., DEERFIELD, ILL.

Pioneer in teleprinted communications systems and equipment since 1911

MOTORSWITCH



by USI

Heart of the Central Office Telephone Exchange

The Motorswitch has been proven in over a million lines of central office systems now in world-wide service . . . overwhelming evidence of its universal acceptance. Use of the USI Motorswitch enables central office systems to combine the speed and flexibility of common control systems with the simplicity of step-by-step systems.

HIGH STEPPING SPEED—Searches over a maximum of 360 contacts per second, compared to 30 to 40 on stepping switches.

NEGLIGIBLE VIBRATION—Is an advantageous result of the Motorswitch being electrically driven and electrically stopped. Microphonics are reduced and noise levels in equipment rooms are lowered by the absence of ratchet-driven parts.

PRECIOUS-METAL TWIN WIPER CONTACTS—In talking circuits provide lowest contact resistance and maximum reliability and are used throughout the Motorswitch construction.

SOLDERLESS BANK CONTACT STRIPS—Reduce the required number of soldered connections by 90% . . . increase reliability . . . simplify regrading . . . cut the need for grading and level hunting switches.

VERTICAL BANK CONTACTS—Shrug off wear-producing dust.

USI® CORP.

UNITED STATES INSTRUMENT CORPORATION

CHARLOTTESVILLE, VIRGINIA

New Equipment

DEVELOPED FOR

THE INDEPENDENT TELEPHONE INDUSTRY

Fall Showing by

COOK

THE IMPAK POWER TOOL LINE

3C PROTECTED TERMINAL BLOCKS

SPLICE COAT & CABLE COAT

COOK BATTERY CHARGER

HI-FI LOADING COILS

BD TERMINAL for underground plastic cable

IMPAK

GENERATORS, PUMPS, BLOWERS, CABLE CUTTERS AND POWER TOOLS

IMPAK VENTILATORS

Portable centrifugal blower, equipped with ⅕ H.P., 115 volt, 1 phase, 60 cycle motor, with either 6″ or 8″ hose adapter, carrying handle and cord.

PERFORMANCE DATA IN Cfm. AT VARIOUS PRESSURES

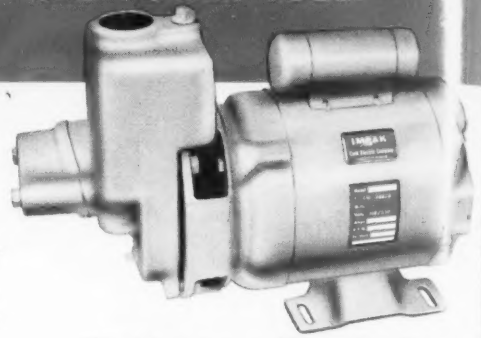
Size	RPM	Wheel Dia.	Static Pressure in Inches 1/8	1/4	3/8	1/2	5/8	3/4	7/8
B12	1725	6-1/4	611	573	535	495	457	411	345

IMPAK PUMP

Self-priming centrifugal, with 1 H.P. heavy duty NEMA Approved motor, and bronze impeller with non-clog features.

RATING TABLE

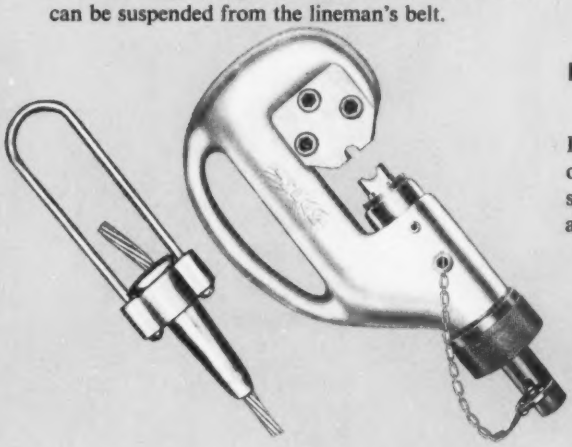
Pump Model Number	Motor H.P.	Suction Size	Discharge Size	Height of Pump above Water*	Discharge Head in Feet* 5	10	15	20	25	30	35	40	45	50	55
					Capacities in U.S. Gallons per Minute										
ESP-100	1	2″	1-1/2″	5′	90	88	86	83	79	74	66	58	48	35	22
				10′	87	85	82	78	72	66	58	48	35	22	
				15′	82	78	76	70	65	58	48	35	22		
				20′	77	75	68	64	56	46	34	21			
				25′	73	66	62	54	46	33	20				



*Heads include normal friction loss. For total head in feet add height above water to discharge head in feet.

IMPAK CARTRIDGE TYPE CABLE CUTTER

A tool designed for operator safety, that will cut cable and wire up to ⅜″ diameter and will operate safely in any attitude or position. Impak cable cutter is a lightweight and economical tool that can be suspended from the lineman's belt.



IMPAK No. 726 ELECTRO-PNEUMATIC ROTO-HAMMER

For percussion drilling and hammering in masonry or concrete, this entirely new mechanism is a time saver for all types of construction or repair. Available in 115 and 230 volts.

No. 605 & 606 IMPAK CHAIN SAWS

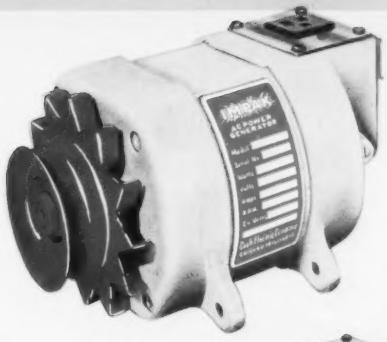
For quietly felling timber, limbing, cutting heavy beams or any heavy lumber at the pole. Model 605 for cutting up to 14″ and 606 up to 20″. Both models require 1500 watt Impak Power Generator.

No. 824 IMPAK WRENCH KIT

Includes No. 823 Impak wrench, a universal joint, a 5″ extension bar, 6 hexagon sockets ½″ to 13/16″ in 16ths, all packed conveniently in a compact sturdy steel case.

IMPAK AC POWER GENERATORS

The only complete line of mobile generators available with wattages of 1000, 2200 and 3500 for 60 cycle single phase AC power. Impak 3 phase 60 cycle generators are also available at 2700, 4000 and 5000 watt ratings. A perfect power source when electric lighting, tools and equipment are required to operate remotely at the pole.

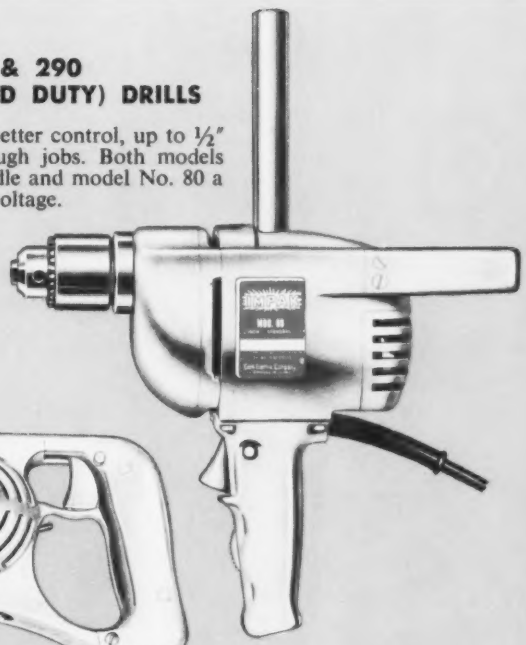


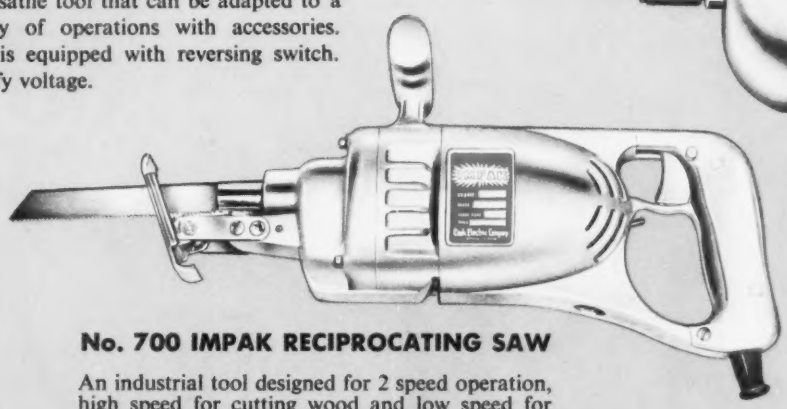
No. 823 IMPAK POWER WRENCH

A versatile tool that can be adapted to a variety of operations with accessories. Unit is equipped with reversing switch. Specify voltage.

No. 80 & 290 IMPAK (STANDARD DUTY) DRILLS

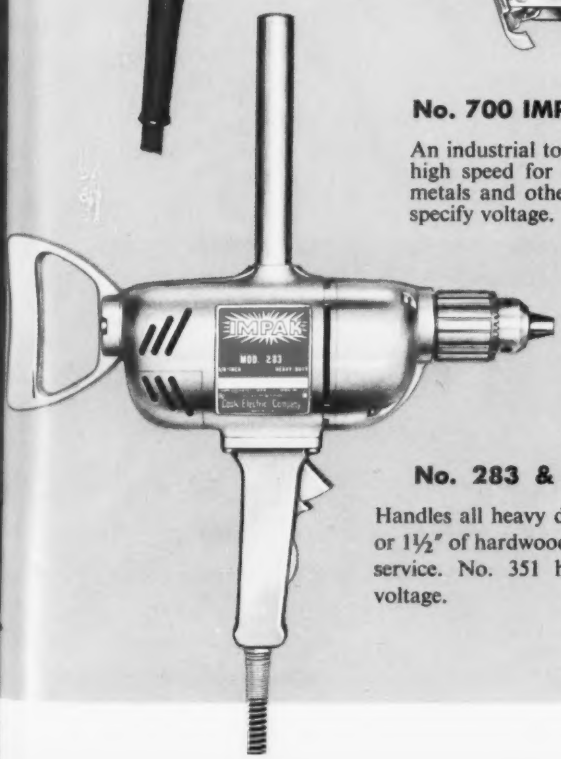
For easier handling and better control, up to ½" fast drilling on really tough jobs. Both models have detachable pipe handle and model No. 80 a reversing switch. Specify voltage.





No. 700 IMPAK RECIPROCATING SAW

An industrial tool designed for 2 speed operation, high speed for cutting wood and low speed for metals and other hard materials. When ordering specify voltage.



No. 283 & 351 IMPAK DRILLS

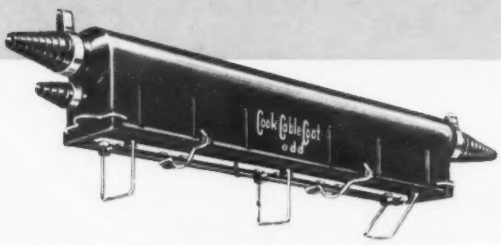
Handles all heavy duty drilling up to ½" of steel or 1½" of hardwood. A quality built drill for long service. No. 351 has reversing switch. Specify voltage.

No. 75 IMPAK ¼" HEAVY DUTY DRILL

An excellent tool for all types of general utility and installation jobs. Standard speed is 1800 r.p.m. Specify voltage.

COOK SPLICE COAT

A neoprene unit designed to eliminate the need for taped splices on cable sizes from 1.1 to 2.2 inches in diameter. Protection of pairs can be added by using Cook 3C protector blocks.



COOK CABLE COAT

A versatile, accessible, easy to install neoprene covered unit for making taps on cable up to 1.2″ diameter, and for taking off subscriber drops and protecting selective pairs with Cook 3C protector blocks.

COOK BATTERY CHARGER

A new battery charger furnished in 12 amp. 1 phase, 24 amp. 1 phase, and 25 amp. 3 phase models with sturdy steel cabinets, all designed for long trouble-free service.

COOK 3C PROTECTOR BLOCKS

These versatile units are used for terminating and protecting cable pairs selectively by inserting Cook Minigap arresters. Furnished in 3, 6 and 16 pairs, combinations of 9 and 12 pair can also be used for terminating cable.

COOK HI-FI LOADING COILS

Cook Hi-Fi loading coils reduce attenuation, combat frequency distortion and avoid cross talk on existing lines. These coils save installation costs by permitting use of smaller gauge line wire.

COOK BD TERMINAL
(for underground plastic cable)

A mounting, terminating and distribution point for underground plastic cable. This terminal can be furnished with Hi-Fi Loading Coils and 3C Terminal Blocks. Specify requirements when ordering.

COOK ELECTRIC Company

Since 1897

2700 SOUTHPORT AVENUE CHICAGO 14, ILLINOIS

EDITORIAL

"Bad News For Louisiana Subscribers"

WE STARTED building our file on the Louisiana rate case of Southern Bell Telephone & Telegraph Co. on December 1, 1954, when the Louisiana Public Service Commission ordered the company to show cause why rates should not be reduced.

Last month we increased the size of our file with the addition of a 51-page decision which — (1) denied Southern Bell its year-old plea for a $14,000,000 rate increase; (2) conceded Southern Bell does deserve a $1.9 million rate hike; and (3) ruled the company could apply for a $1.9 million rate increase "*at such time as it can offer satisfactory proof that it is rendering adequate service to Louisiana subscribers. . . .*"

Of course we are having trouble reconciling the Commission's action with the facts as we know them. But we run into more trouble when we attempt to understand the reasons the Commission gave for (1) denying a rate hike the Commissioners admit is justified; and (2) denying the rate hike Southern Bell stated it needed in order to provide better service.

In fact after listing all the pros and cons we're inclined to go along with the *Wall Street Journal* comment which stated: — "*We don't know who's ringing all the wrong numbers on this connection, but it's pretty plain that the arbitrary party now tying up the line is the Commission itself. . . .*"

That comment nearly matches our own thinking on the recent action of the Louisiana Commission. The records prove (1) Southern Bell's postwar construction in Louisiana totaled $300,000,000; (2) the program had raised the number of the company's Louisiana telephones from 227,000 to over 800,000 by December, 1957; and (3) 99% of all applications for service received during the period had been cared for.

The records also prove such accomplishments had been made despite: (1) a Commission order in June, 1956, which forced the company to reduce rates $3,940,000 per year; (2) five general wage increases during the period amounting to $3,390,000; (3) more and more construction at constantly rising costs; (4) a 31% drop in the company's rate of earnings on the basis of rates established by the Commission in 1952; and (5) Louisiana earnings of $4.24 per $100 of investment while the cheapest money available to the company in 1957 was borrowed at an interest cost of $4.91 per $100.

The evidence also indicates Southern Bell well knew the job that had to be done in Louisiana. In December, 1957 the company's vice president, R. R. Stubbs, told the Louisiana PSC the company needed an over-all rate increase amounting to $13,000,000 a year and if this amount were granted the company would be enabled to launch a full scale expansion program costing approximately $49 million in 1958.

Other points emphasized by Vice President Stubbs at the December, 1957, hearing included these facts: (1) without any increase the company would be able to spend only $14 million on construction — or less than one third of what was needed to meet the state's full telephone needs in 1958; (2) without a revenue increase only 17,000 main telephones could be added out of 40,000 needed in Louisiana during 1958; and (3) in 1959 the company would be able to install only 9,500 main telephones and would have to add more than three times that number to the waiting list.

This does not sound like the talk of a man or company who is the least bit interested in providing — (as the Louisiana PSC claimed) — "*grossly inadequate service*" or "*failing to perform its obligations as a public utility.*"

Rather it is the talk of a man speaking for a company that realizes the job that must be done and that completion of the job depends upon commission recognition of the need for rates that will produce earnings in sufficient amounts to enable the company to expand and provide the needed services promptly as they are required.

We are sorry the Louisiana PSC did not recognize these facts. As we see it the company has no alternative but to appeal to the courts and we hope when the appeal does come up before the East Baton Rouge District Court Southern Bell will receive the rates necessary to produce the earnings to do the service job it wants to do.

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Install It & FORGET IT

BATTERY CHARGERS

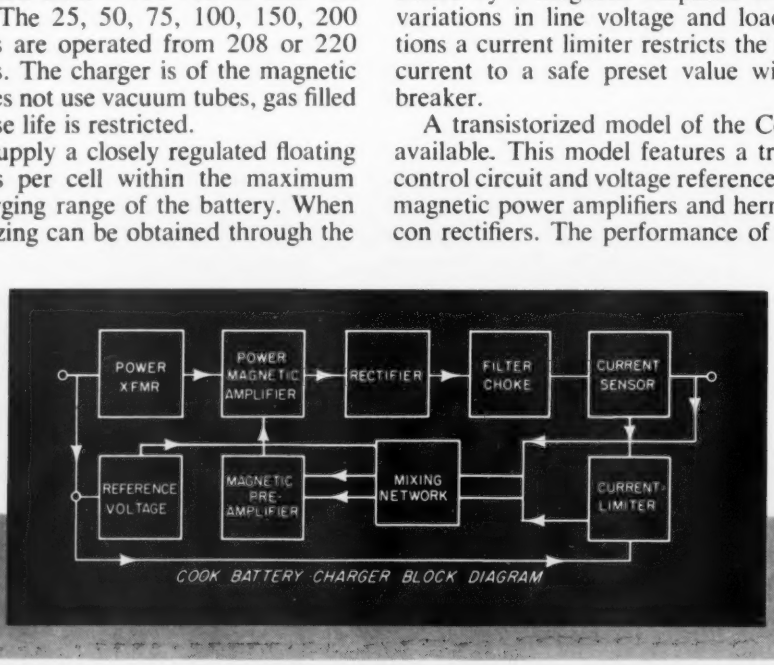
by COOK

WITH DIODE POWER RECTIFICATION AND TRANSISTORIZED VOLTAGE CONTROL

THE Cook battery charger is of the constant voltage type having a rated output of 49.5 to 53.7 volts for use with 23, 24 and 25 cells. The 12 amp and 24 amp models can be operated from a 110 volt or 220 volt single phase supply. The 25, 50, 75, 100, 150, 200 and 400 amp models are operated from 208 or 220 volts 3 phase supplies. The charger is of the magnetic amplifier type and does not use vacuum tubes, gas filled tubes, or motors whose life is restricted.

This charger will supply a closely regulated floating voltage of 2.15 volts per cell within the maximum optimum current charging range of the battery. When needed battery equalizing can be obtained through the use of a toggle switch mounted on the control panel which increases the regulated charging voltage to 2.33 volts per cell. Floating and equalizing voltages are regulated by a magnetic amplifier to within $\pm\frac{1}{2}\%$ for variations in line voltage and load. Under all conditions a current limiter restricts the maximum available current to a safe preset value without releasing the breaker.

A transistorized model of the Cook Charger also is available. This model features a transistorized voltage control circuit and voltage reference in conjunction with magnetic power amplifiers and hermetically sealed silicon rectifiers. The performance of this model is com-



COOK BATTERY CHARGER BLOCK DIAGRAM

DESIGN FEATURES

COMPONENT DESCRIPTION . . . Cook chargers use basic electrical and magnetic circuits and dependable extended life components such as hermetically sealed, solid state, silicon rectifiers and transistors, vacuum-impregnated transformers and reactors, vitreous-enameled wire wound resistors and potentiometers, and proven circuit protectors.

POWER TRANSFORMER . . . Transformers of Cook Telephone Quality, vacuum impregnated with conservative temperature rises . . . AC voltage supply taps accommodate standard range of voltages.

MAGNETIC AMPLIFIERS . . . Designed for long life and efficient operation and made to Cook Telephone Quality . . . precisely laminated and vacuum-impregnated to operate silently.

CURRENT LIMITER . . . Precisely constructed by Cook to Telephone Quality from special laminations to insure minimum temperature rise and long life, trouble free operation.

VOLTAGE REFERENCE . . . Automatically maintains a stable reference voltage which controls the output regulation.

FILTER CHOKE . . . Laminated and vacuum impregnated choke made to Cook Telephone Quality standards insure extended life, improved power factor, ripple output and minimum noise.

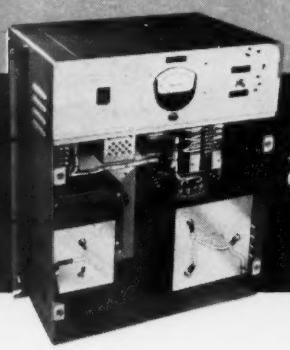
CONTROL RESISTORS . . . Wire wound, vitreous-enameled quality resistors.

CONTROL DIODES . . . Hermetically sealed silicon diodes derated to a fraction of their power and current ratings serve as primary control for the current limiter and output voltage regulation.

OTHER COMPONENTS . . . Indicating Instruments, Switches, Fuses, Circuit Breakers and other components are selected to meet Cook Telephone Product Quality . . . No charge alarm relay is optional.

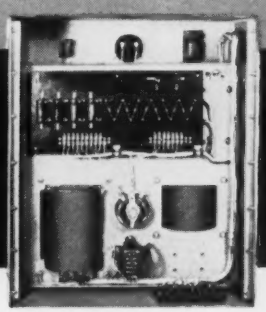
CABINET . . . Rigidly constructed steel cabinet, finished in attractive grey hammerloid. Overall dimensions 30" H x 23" W x 14" D. Provisions exist for wall or rack mounting.

SILICON POWER RECTIFIER . . . Low forward drops (as compared to selenium rectifiers) reduce size of the magnetic components . . . hermetic sealing increases life and efficiency of rectifiers.



A view of the Cook Battery Charger with the lower front panel removed.

Rear view of the unit.



parable to that of the all magnetic controlled charger.

Cook chargers are completely enclosed in a rigidly constructed steel cabinet and attractively finished. Mounting and installation provisions are based on standard rack mounts. These units do not necessitate forced cooling because of incorporated design features which result in silent dependable operation. All controls, connectors and fuses are conveniently located inside the cabinet.

The Cook charger is a solid state device with excellent voltage regulation produced by a closed loop magnetic amplifier. AC voltage is supplied through an isolation transformer to a power magnetic amplifier whose output is rectified by silicon rectifiers and then filtered. The resulting output voltage is compared to a standard reference voltage and any difference between these voltages is instantly sensed by a magnetic preamplifier. In turn, the magnetic preamplifier automatically adjusts the output delivered by the power magnetic amplifier so as to maintain constant the output voltage. A current limiter overrides the voltage control whenever the current approaches a preset safe limit and keeps the load current below this limit.

Battery charger efficiency is held between 70% and 75% from 25% to 125% of rated load. This high efficiency results from the use of hermetically sealed silicon power rectifiers, which have a low forward drop (as compared with selenium rectifiers), and the incorporation of a closed loop control circuit.

No periodic adjustments are needed for silicon rectifiers as compared to selenium rectifiers which age with use. Reduced size and weight of all components result from the use of these proven solid state rectifiers.

Lack of any moving or vibrating parts insures extended life and no operating noise.

COOK ELECTRIC Company
Since 1897
2700 SOUTHPORT AVENUE CHICAGO 14, ILLINOIS

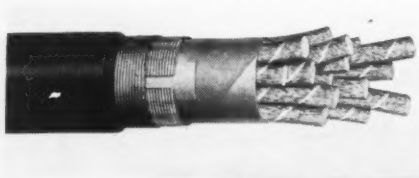
ANACONDA STALPETH

PAPER-INSULATED TELEPHONE CABLE THAT'S 30 TO 50% LIGHTER!

Save on initial costs . . . on shipping, installation, maintenance.
Offers all the advantages of Paper-lead Cable Plus

NEW ECONOMY! Right off, Anaconda Stalpeth saves you money in initial cost. Its lighter weight saves you more on freight charges. You cut installation costs. Its light weight is of tremendous help for fast aerial installations. Stalpeth also simplifies the problem of pulling through ducts. Stalpeth goes right on saving you money, for its dependability, electrical and mechanical properties eliminate many maintenance problems.

NEW LIGHT WEIGHT! Stalpeth is 30% to 50% lighter than ordinary paper-lead cable because the light-weight sheath is STeel, ALuminum and PolyETHylene rather than heavy lead. The result: new ease and economy in both installation and maintenance!



STALPETH—Paper-insulated, steel tape, aluminum shield, polyethylene jacket.

NEW DEPENDABILITY! Each conductor for Stalpeth is individually inspected as it comes out of the insulating machine. In addition, every pair is tested. Thorough in-process control eliminates need for costly, time-consuming field inspection.

NEW OUTSTANDING FEATURES! Stalpeth offers many advantages: (1) The polyethylene jacket offers electrical protection from falling power lines. It prevents power faults which could damage lead-sheathed cable. (2) Stalpeth's high-molecular-weight polyethylene jacket prevents corrosion problems frequently met in duct installations. (3) The electrical characteristics of Stalpeth have been engineered to the high standards of all Anaconda cable: minimum conductor resistance . . . high insulation resistance . . . maximum dielectric strength . . . low resistance shield—*traditional paper quality with new economical light-weight sheath.*

NEW SERVICE! Anaconda is the independent telephone cable manufacturer to the independent company. Behind this manufacturer stand 50 years of experience in the production of paper-insulated cables. And today the latest in manufacturing equipment and testing devices, and telephone-experienced personnel join forces to bring you top-quality Stalpeth. Distribution points across the country assure you fast delivery and service. Write for Bulletin DM-5771, containing complete technical data on Stalpeth, to: Anaconda Wire & Cable Company, 25 Broadway, New York 4, New York. 58326

CALL THE MAN FROM

ANACONDA®

FOR **STALPETH**

PAPER-INSULATED TELEPHONE CABLE

the independent manufacturer to the independent telephone industry

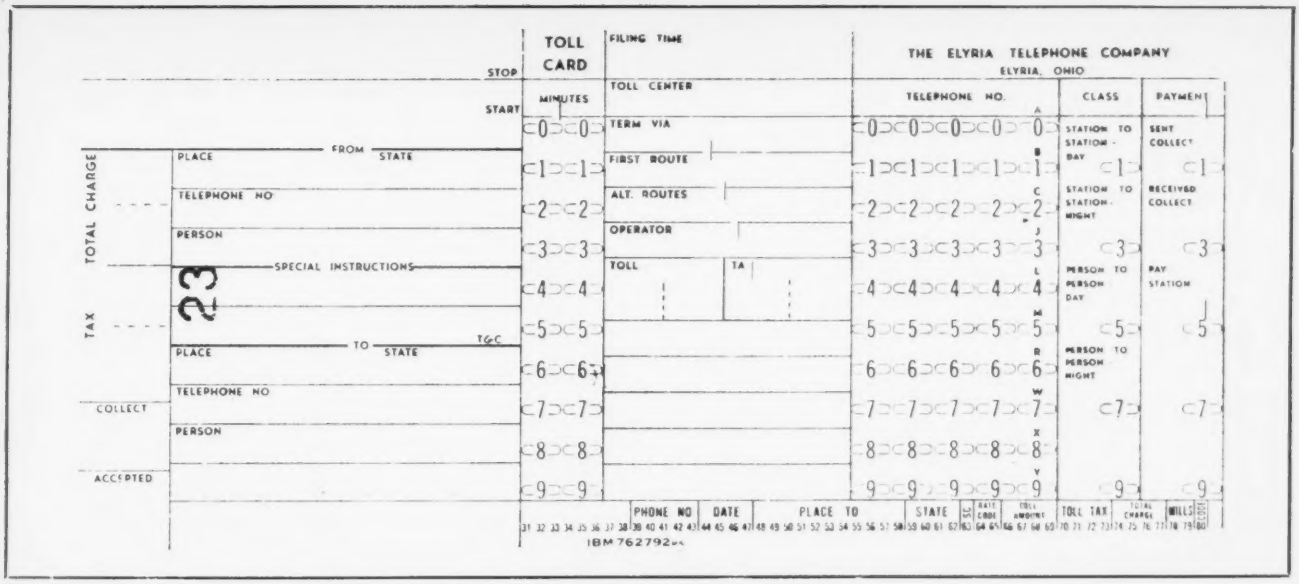


FIGURE ONE: — Blank mark sensed toll ticket of the Elyria (Ohio) Telephone Company.

GAZING IN THE TRAFFIC CRYSTAL BALL

By JACK C. CLUEN
General Traffic Supt., United Tel. Co. of Ind., Warsaw

In the future, as in the past, the trends will be toward better, faster service rendered as inexpensively as possible, and toward entirely new services.

LET'S SEE in a general way what traffic trends may be in our future. Since most telephone companies are in business for two reasons, to render a needed service and to earn a return on invested capital or as we plain folks say "make money," we would assume that in the future as in the past, the trends will be toward better, faster service rendered as inexpensively as possible, as well as entirely new services as required by the using public or new services which the industry develops and sells to the public.

We are probably all aware of the fact that one primary means of rendering service less expensively is the elimination of wage or labor costs. The second major means of rendering service inexpensively is the better utilization of equipment in which we already have a large investment.

This equipment will, to a large extent, depreciate at the same rate whether it is used eight hours a day or 21 hours a day or whether it is used 50 times in an hour as opposed to 75 times in an hour. Basically, what we have to sell is time in the life of our equipment. The more of this time we can sell, the less the depreciation cost becomes in relation to the total revenue from the service rendered, and the less expensively the individual service item can be rendered.

Let us first take up the labor saving means of rendering less expensive service although the two means often overlap. In the case of local service most companies are well into a complete dial conversion program and the saving of local traffic labor costs. Thus, in a few years only toll and D.S.A. service will be rendered by operators, and it must be in this area that savings in labor cost can be made.

It appears that in the Traffic Department these savings can be made in three ways primarily:

(1) Getting the customer to perform as much of the labor of his service as possible by mechanization, i.e.

Next page please

the so called CAMA or Automatic Ticketing and Timing machines.

(2) Saving as much operator time as possible in handling the remaining non-mechanized traffic.

(3) Mechanizing or centralizing services not previously considered profitable or possible to mechanize or centralize.

In addition labor savings in other departments as a result of mechanization of the handling of the end product of the Traffic Department — toll tickets — will become important to the Traffic force.

Since the labor savings by mechanization of toll messages is largely a decision of management to make and is a major subject in itself, we will limit our discussion to possible trends or means of saving operating time and encouraging customers to utilize machine ticketing and timing equipment when it has been provided as well as utilization of other toll equipment.

"*Small Bits of Time*"

THE 1957 annual report of the American Telephone & Telegraph Co. states that the average toll call speed of connection in that year was 72 seconds. It is therefore apparent that in saving labor costs of handling toll calls we will be concerned with small bits of time on any one call which in the aggregate can amount to substantial time saving and better service.

Some of the traffic methods now being proposed or in limited use which will help in the never ending search for time conservation are:

(1) Timing of person to person and delayed station calls to begin as soon as the called party is on the line. This, it is hoped, will help eliminate the frequent bickering between called and calling party as to whom will get on the line first which is prevalent among those PBX users where executive's calls are placed by their secretaries who demand that the other party be on the line before bothering their bosses. This should save operator, circuit and equipment time. At this time the use of this method has not been started pending approval of the Federal Communications Commission.

EDITOR'S NOTE

The TE&M editorial staff is happy to add JACK CLUEN'S name to the growing list of industry members who author articles for exclusive publication in TELEPHONE ENGINEER & MANAGEMENT.

This list now includes such authorities as Mr. CLUEN, DAN TOMPERS, Chief Engineer of the West Coast Tel. Co.; ALLAN R. STACEY, Vice Pres., Sunland-Tujunga Tel. Co., Sunland, Calif.; L. A. HODSON of the Stromberg-Carlson Co.; P. J. EHERENMAN, general commercial manager, United Tel. Co. of Ind.; T. DeWITT TALMAGE, training division of Kellogg Swbd. & Supply Co.; JOHN S. REED, of the Lincoln (Neb.) Tel. & Tel. Co. — and many others.

(2) Retention of original coin deposit on pay station calls. Instead of refunding the dime deposited to reach the operator this deposit is applied to toll charge. This is primarily effective where the proportion of A-B toll is very high and the charge is frequently only $.10. It will be particularly effective on D.S.A. boards handling only A-B toll. It can be seen that refunding $.10 and then almost immediately collecting $.10 is almost a completely duplicate operation.

JACK C. CLUEN'S first job was with the United Telephone Co. of Indiana, when he graduated from high school in 1937. He spent four years in the Accounting Department of the company. In January of 1942 he enlisted in the United States Air Force and was discharged as a Captain in 1946. He has retained his reserve status and is at present a Major actively participating in the Air Force Reserve Training Program. Upon his return to civilian life, Mr. Cluen rejoined United Telephone Co. of Indiana, Inc., as assistant to the general traffic superintendent and assistant treasurer. He was promoted to assistant general traffic superintendent in 1950 and to general traffic superintendent in December 1952, the position he now holds.

(3) Not verifying the acceptance of charges on third number calls or not verifying the acceptance of charges on third number calls where the bill to number is within the $.35 toll rate of either the calling or called number. This naturally saves operator and circuit time. Here it would seem wise to bring up the point that the savings in the Traffic Department and in the use of equipment must be checked against possible increased costs in other departments. If a great deal of time and money is expended to obtain collection on too many such calls, the savings at the switchboard may be more than offset in other departments. If the overall costs are increased, the traffic saving is not a good idea. The elimination of the name on credit plan calls is another case where traffic savings may have been offset in additional toll billing and reporting costs.

(4) The change of NC to so called stab attempts. If the customer will stay on the line on dialable calls, continuous attempts will be made for five minutes. On ringdown calls three attempts are made in the first minute with the customer on the line and after customer dismissal one attempt per minute for the next four minutes for a total of five minutes. It is hoped that this will

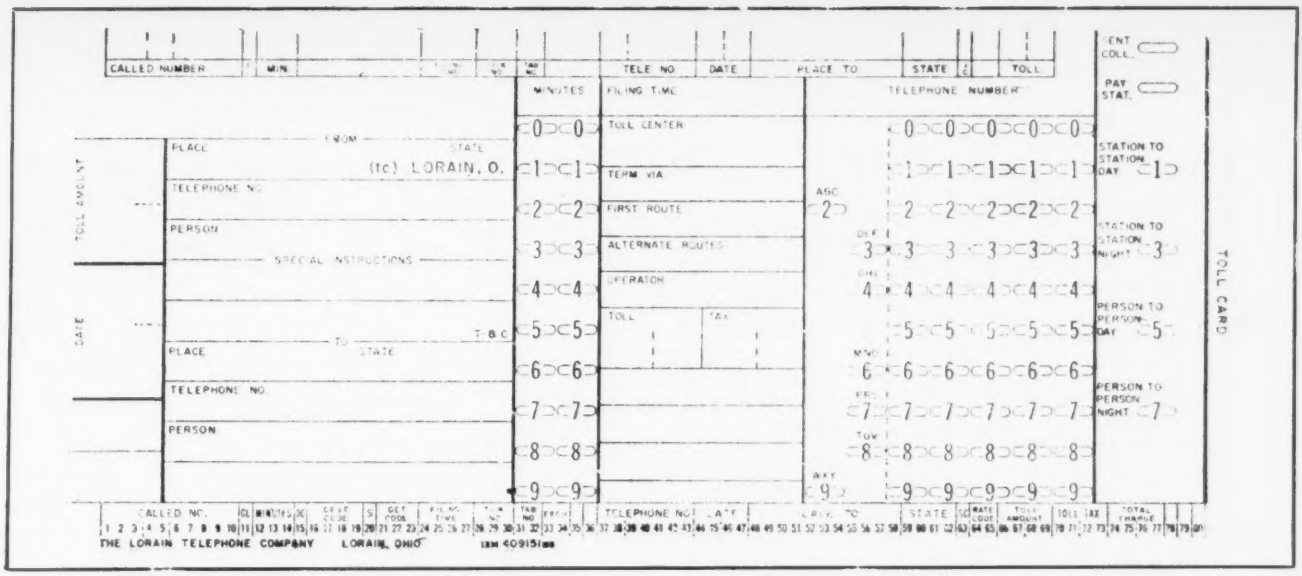


FIGURE TWO: — Blank mark sensed toll ticket of the Lorain (Ohio) Telephone Company.

give better service by effecting faster completion of calls and that there will be less over all operating time spent than there was under the procedure of dismissing the customer at the end of one minute and then probably having to go back and make NC reports to him.

(5) Under present practice on delayed calls if the customer indicates he wishes to place the call himself later, he is given dial route to the called place if it is not listed in position route information. He is asked to give the route when he places the call again. This practice may be expanded in the future to include all delayed calls even though the route is available at the position. This educates the customer in dial routing and will help ready the public for D.D.D. as well as saving operating time in obtaining the route.

(6) Direct distance dialing of person-to-person, collect and credit card calls was started by the New York Telephone Co. on June 9, 1958. In this initial use the operator is connected only to get the called person on the line, obtain acceptance of called charges or obtain the credit card number.

These are but a few of many relatively small toll practice changes which have just been placed in effect or which we can expect in the future as a means of giving faster service at less cost.

Three Rate Periods

UNDER the better utilization of equipment you may encounter the employment of three rate periods to encourage use of station-to-station toll service during present low usage periods.

Now in use in Wisconsin and in Indiana is the "Late Night" rate period. As it is used in Indiana these hours are from 9:00 P.M. to 4:30 A.M. every day on station-to-station calls only. The minimum charge during this period pays for twice the number of initial minutes of conversation as during the "Regular Night" rates from 6:00 P.M. to 9:00 P.M. ***Please turn to page 49***

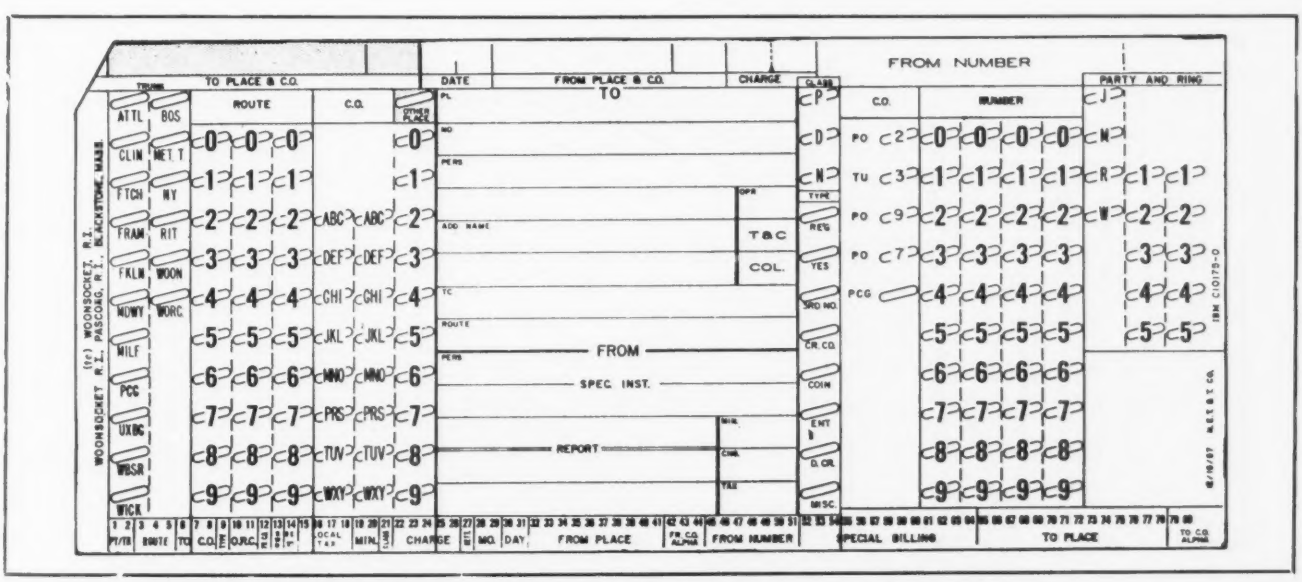


FIGURE THREE: — Blank mark sensed toll ticket as used by Bell System.

GOOD TELEPHONE SERVICE

Starts With Proper Installation

By JOHN S. REED

GOOD installation practices stimulate the plant employe's confidence by enabling him to deal intelligently with the situations that arise in the course of his daily work.

CHAPTER TWO - Drop Distribution

CHAPTER TWO of TE&M's new Operating manual discusses: (1) Drop distribution from cable terminal, and (2) Drop Distribution in open-wire leads.

Drop Distribution From Cable Terminal-Routing Drop

METHODS of distributing drops from a cable terminal differ with the type of terminal employed, whether pole or strand mounted, and the company practice. *Figures Two* and *Three* illustrate a typical drop distribution from a strand mounted terminal and *Figure Four*, from a pole mounted terminal.

In stringing the drop wire from the cable terminal, care should be exercised to obtain the minimum required clearances or greater from the ground and from foreign wires for the drop spans. A drop span should not be located where it will sag or swing against trees, buildings, roofs, poles, cable, guys, or similar obstructions. The wire should not be placed over a pole step or in any other location where it might be damaged in the normal use of the premises. Adequate climbing space should be maintained on all jointly-used poles.

It is often necesary to route a drop span to avoid obstacles such as trees and shrubbery, to avoid crossing a clothesline, or to keep the drop wire off private property other than the subscriber's premises. In many cases, the most satisfactory method is to attach the drop span to the cable suspension strand in the proper location to bring the drop wire around the obstacle.

It is recommended that not more than two drops be placed on a single span clamp located at a distant point from the pole. For more than two drops, additional span clamps are used. When one or two drop wires span from one side of the cable lead to buildings on that side, one span clamp is installed. For drops spanning from both sides, two clamps are placed side by side as shown in *Figure Five*, which indicates the installation where a pole mounted terminal is involved. The drive hook is located on the pole to bring the wire attachment on the pole directly in line with the cable. This location is selected to place the drop spans in line with the cable lead at this point and enable the drop wires to be brought to a span clamp on either side of the cable without having to cross under the cable.

For strand mounted terminals, the method shown

in *Figure* 6 is emloyed. To clear the pole step on the opposite side from the terminal, the drive hook is located 4 inches below the cable and directly above the pole step or slightly back of it, as required to provide the needed clearance. When the drop goes to the building on the cable side of the pole, two span clamps are

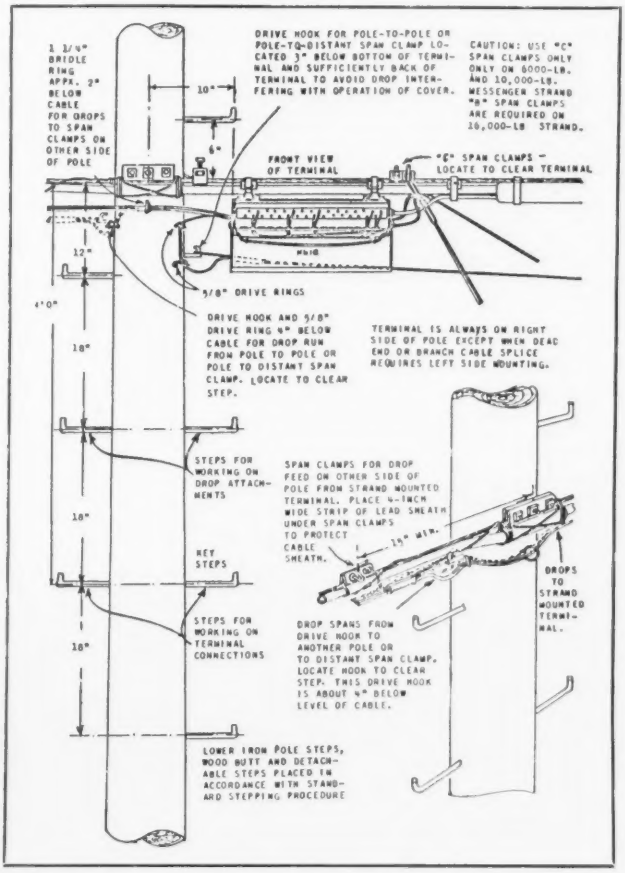

1 1/4" BRIDLE RING APPX. 2" BELOW CABLE FOR DROPS TO SPAN CLAMPS ON OTHER SIDE OF POLE
DRIVE HOOK FOR POLE-TO-POLE OR POLE-TO-DISTANT SPAN CLAMP LOCATED 3" BELOW BOTTOM OF TERMINAL AND SUFFICIENTLY BACK OF TERMINAL TO AVOID DROP INTERFERING WITH OPERATION OF COVER.
CAUTION: USE "C" SPAN CLAMPS ONLY ON 6000-LB. AND 10,000-LB. MESSENGER STRAND "B" SPAN CLAMPS ARE REQUIRED ON 16,000-LB STRAND.
FRONT VIEW OF TERMINAL
"C" SPAN CLAMPS - LOCATE TO CLEAR TERMINAL
10"
6"
12"
4'0"
18"
18"
18"
5/8" DRIVE RINGS
DRIVE HOOK AND 5/8" DRIVE RING 4" BELOW CABLE FOR DROP RUN FROM POLE TO POLE OR POLE TO DISTANT SPAN CLAMP. LOCATE TO CLEAR STEP.
TERMINAL IS ALWAYS ON RIGHT SIDE OF POLE EXCEPT WHEN DEAD END OR BRANCH CABLE SPLICE REQUIRES LEFT SIDE MOUNTING.
STEPS FOR WORKING ON DROP ATTACHMENTS
KEY STEPS
STEPS FOR WORKING ON TERMINAL CONNECTIONS
SPAN CLAMPS FOR DROP FEED ON OTHER SIDE OF POLE FROM STRAND MOUNTED TERMINAL. PLACE 4-INCH WIDE STRIP OF LEAD SHEATH UNDER SPAN CLAMPS TO PROTECT CABLE SHEATH.
15" MIN.
DROPS TO STRAND MOUNTED TERMINAL.
DROP SPANS FROM DRIVE HOOK TO ANOTHER POLE OR TO DISTANT SPAN CLAMP. LOCATE HOOK TO CLEAR STEP. THIS DRIVE HOOK IS ABOUT 4" BELOW LEVEL OF CABLE.
LOWER IRON POLE STEPS, WOOD BUTT AND DETACHABLE STEPS PLACED IN ACCORDANCE WITH STANDARD STEPPING PROCEDURE

FIG. TWO: — Drop distribution from strand mounted terminal.

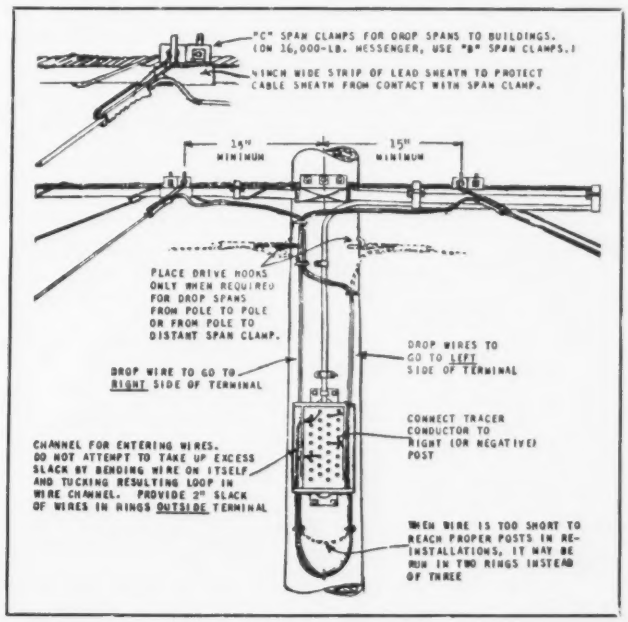

"C" SPAN CLAMPS FOR DROP SPANS TO BUILDINGS. (ON 16,000-LB. MESSENGER, USE "B" SPAN CLAMPS.)
4 INCH WIDE STRIP OF LEAD SHEATH TO PROTECT CABLE SHEATH FROM CONTACT WITH SPAN CLAMP.
15" MINIMUM
15" MINIMUM
PLACE DRIVE HOOKS ONLY WHEN REQUIRED FOR DROP SPANS FROM POLE TO POLE OR FROM POLE TO DISTANT SPAN CLAMP.
DROP WIRES TO GO TO LEFT SIDE OF TERMINAL
DROP WIRE TO GO TO RIGHT SIDE OF TERMINAL
CONNECT TRACER CONDUCTOR TO RIGHT (OR NEGATIVE) POST
CHANNEL FOR ENTERING WIRES. DO NOT ATTEMPT TO TAKE UP EXCESS SLACK BY BENDING WIRE ON ITSELF AND TUCKING RESULTING LOOP IN WIRE CHANNEL. PROVIDE 2" SLACK OF WIRES IN RINGS OUTSIDE TERMINAL
WHEN WIRE IS TOO SHORT TO REACH PROPER POSTS IN RE-INSTALLATIONS, IT MAY BE RUN IN TWO RINGS INSTEAD OF THREE

FIG. FOUR: — Drop distribution from pole mounted terminal.

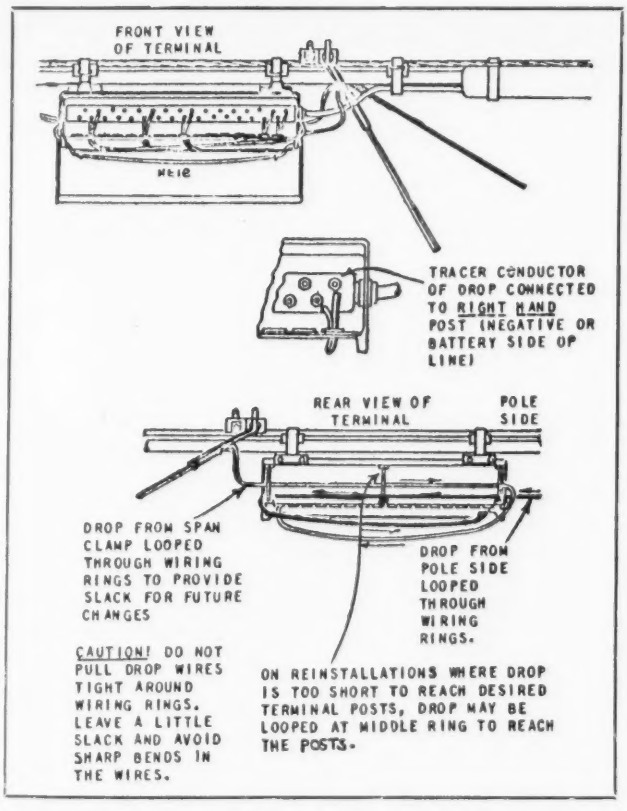

FRONT VIEW OF TERMINAL
TRACER CONDUCTOR OF DROP CONNECTED TO RIGHT HAND POST (NEGATIVE OR BATTERY SIDE OF LINE)
REAR VIEW OF TERMINAL
POLE SIDE
DROP FROM SPAN CLAMP LOOPED THROUGH WIRING RINGS TO PROVIDE SLACK FOR FUTURE CHANGES
DROP FROM POLE SIDE LOOPED THROUGH WIRING RINGS.
CAUTION! DO NOT PULL DROP WIRES TIGHT AROUND WIRING RINGS. LEAVE A LITTLE SLACK AND AVOID SHARP BENDS IN THE WIRES.
ON REINSTALLATIONS WHERE DROP IS TOO SHORT TO REACH DESIRED TERMINAL POSTS, DROP MAY BE LOOPED AT MIDDLE RING TO REACH THE POSTS.

FIG. THREE: — Details of drop wiring and connections in strand mounted terminal.

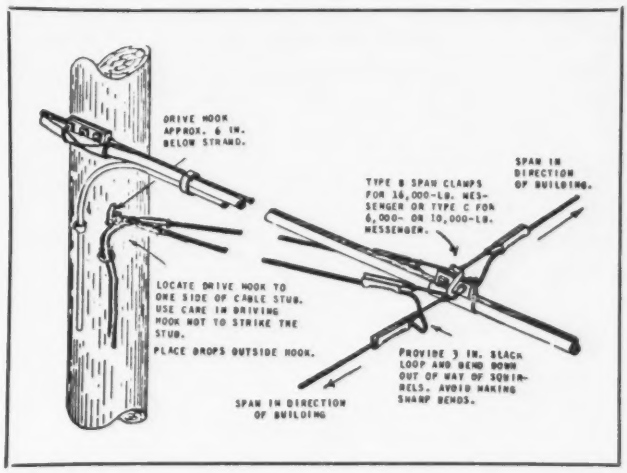

DRIVE HOOK APPROX. 6 IN. BELOW STRAND.
SPAN IN DIRECTION OF BUILDING.
TYPE B SPAN CLAMPS FOR 16,000-LB. MESSENGER OR TYPE C FOR 6,000- OR 10,000-LB. MESSENGER.
LOCATE DRIVE HOOK TO ONE SIDE OF CABLE STUB. USE CARE IN DRIVING HOOK NOT TO STRIKE THE STUB.
PLACE DROPS OUTSIDE HOOK.
PROVIDE 3 IN. SLACK LOOP AND BEND DOWN OUT OF WAY OF SQUIRRELS. AVOID MAKING SHARP BENDS.
SPAN IN DIRECTION OF BUILDING

FIG. FIVE: — Method of attaching drop wire from pole mounted terminal to messenger for routine drop around obstruction.

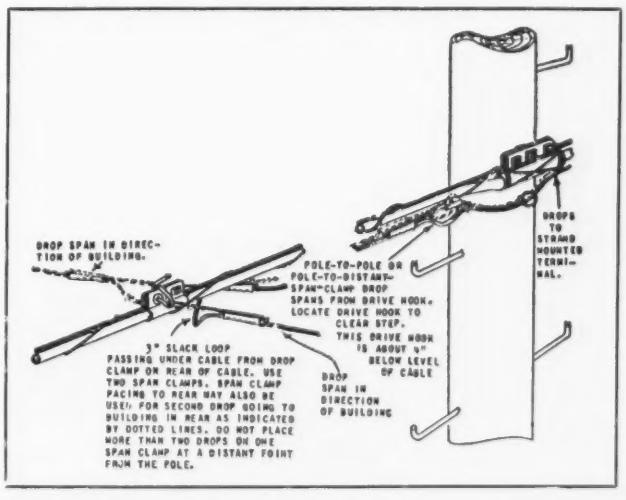

DROP SPAN IN DIRECTION OF BUILDING.
POLE-TO-POLE OR POLE-TO-DISTANT-SPAN-CLAMP DROP SPANS FROM DRIVE HOOK. LOCATE DRIVE HOOK TO CLEAR STEP. THIS DRIVE HOOK IS ABOUT 4" BELOW LEVEL OF CABLE
DROPS TO STRAND MOUNTED TERMINAL.
3" SLACK LOOP PASSING UNDER CABLE FROM DROP CLAMP OR REAR OF CABLE. USE TWO SPAN CLAMPS. SPAN CLAMP FACING TO REAR MAY ALSO BE USED FOR SECOND DROP GOING TO BUILDING IN REAR AS INDICATED BY DOTTED LINES. DO NOT PLACE MORE THAN TWO DROPS ON ONE SPAN CLAMP AT A DISTANT POINT FROM THE POLE.
DROP SPAN IN DIRECTION OF BUILDING

FIG. SIX: — Attaching drop wire from strand mounted terminal to messenger strand for routing drop.

needed to enable the drop to cross under the cable without rubbing on the latter. A single span clamp is sufficient if the drop spans to the building on the op-

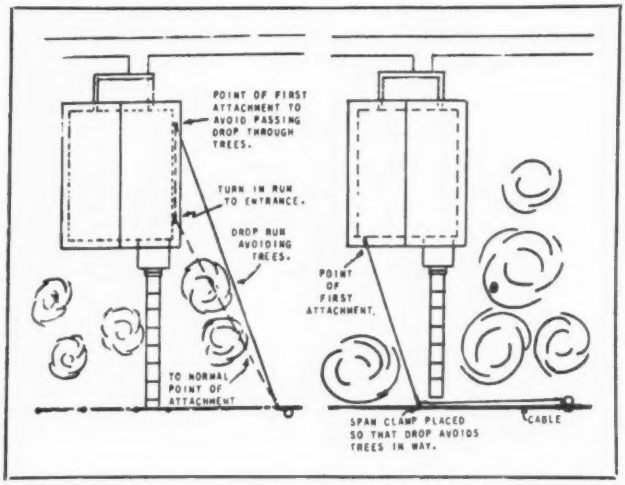

POINT OF FIRST ATTACHMENT TO AVOID PASSING DROP THROUGH TREES.
TURN IN RUN TO ENTRANCE.
DROP RUN AVOIDING TREES.
POINT OF FIRST ATTACHMENT.
TO NORMAL POINT OF ATTACHMENT
SPAN CLAMP PLACED SO THAT DROP AVOIDS TREES IN WAY.
CABLE

FIG. SEVEN: — Method of routing terminal-to-building drop run around trees on property lots.

posite side from the cable side of the pole.

Figure Seven illustrates the method of routing the terminal-to-building drop run to avoid obstructions or other undesirable locations.

Drop Distribution In Open-Wire Leads

IN CROSSARM leads where climbing space on the pole or clearance from the pole permits, the drop span to the building should be attached directly to the

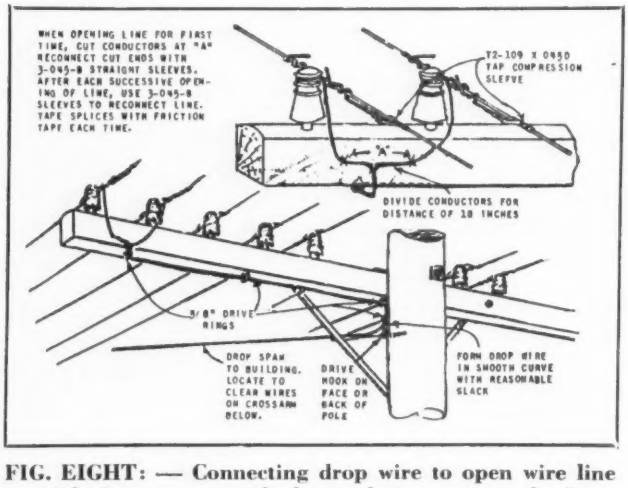

WHEN OPENING LINE FOR FIRST TIME, CUT CONDUCTORS AT "A" RECONNECT CUT ENDS WITH 3-045-B STRAIGHT SLEEVES. AFTER EACH SUCCESSIVE OPENING OF LINE, USE 3-045-B SLEEVES TO RECONNECT LINE. TAPE SPLICES WITH FRICTION TAPE EACH TIME.
T2-109 X 045D TAP COMPRESSION SLEEVE
DIVIDE CONDUCTORS FOR DISTANCE OF 18 INCHES
5/8" DRIVE RINGS
DROP SPAN TO BUILDING. LOCATE TO CLEAR WIRES ON CROSSARM BELOW.
DRIVE HOOK ON FACE OR BACK OF POLE
FORM DROP WIRE IN SMOOTH CURVE WITH REASONABLE SLACK

FIG. EIGHT: — Connecting drop wire to open wire line with drop span attached to pole in crossarm lead.

pole as shown in *Figure Eight,* otherwise attachment should be made on a crossarm as indicated in *Figure Nine.*

In bracket leads, the drop wire is attached to the pole in the manner illustrated in *Figure* 10.

Requirements For Drop Wire Spans

BESIDES meeting requirements for minimum clearances or greater from the ground and from foreign wires, the drop spans should be limited in length and

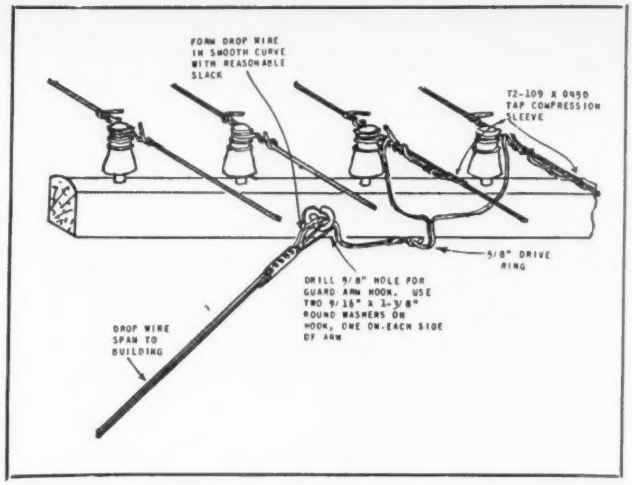

FORM DROP WIRE IN SMOOTH CURVE WITH REASONABLE SLACK
T2-109 X 045D TAP COMPRESSION SLEEVE
5/8" DRIVE RING
DRILL 5/8" HOLE FOR GUARD ARM HOOK. USE TWO 9/16" X 1-3/8" ROUND WASHERS ON HOOK, ONE ON EACH SIDE OF ARM
DROP WIRE SPAN TO BUILDING

FIG. NINE: — Connecting drop wire to open wire line with drop span attached to crossarm.

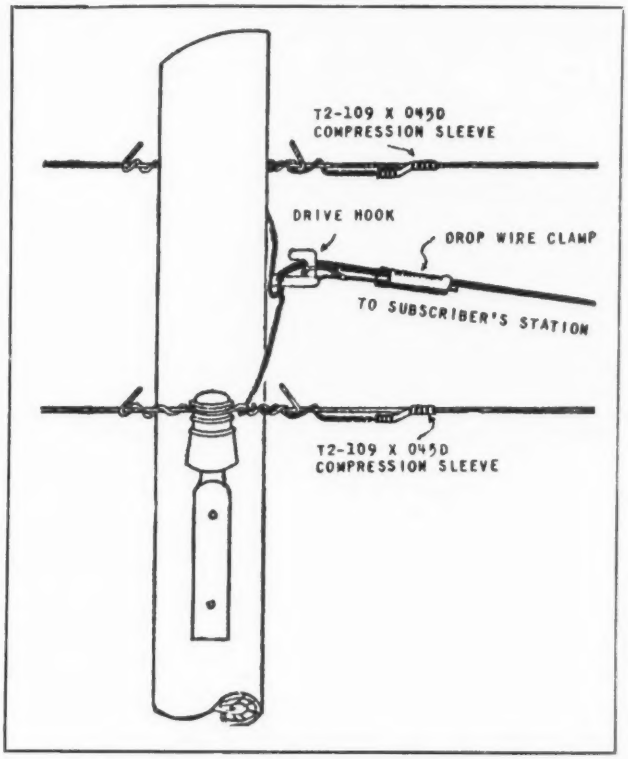


FIG. 10: — Connecting drop wire to open-wire line in bracket lead.

should have not less than minimum specified sags.

When stringing drop-wire, the span length should be limited to 150 feet whenever possible, to avoid undue stretching of the wire under ice loads. In sparsely settled areas, excessively long spans can be avoided by placing one or more light poles between the distribution pole and the subscriber's house. In more crowded areas it may be possible to obtain permission to place intermediate drop attachments on other buildings in the route of the drop to shorten the span lengths. In no case, however, should the span length be made greater than 200 feet.

Sags in drop wire spans should not be less than the minimum values indicated below. Wires that are

pulled up too tight may develop faults at the attachment points, especially under ice loading.

Minimum Sags in Drop Wire Spans

Span Length in Feet	Pole-to-Building Span	Pole-to-Pole Span
50 or less	6″	
75	12″	
100	24″	18″
125	48″	36″
150	72″	48″
160 to 200	Greatest possible sag limited by clearance requirements	

The amount of sag in a drop wire span is determined by sighting along the bottom of the lowest point in the span on a line parallel to an imaginary line drawn through the end attachments of the span as illustrated

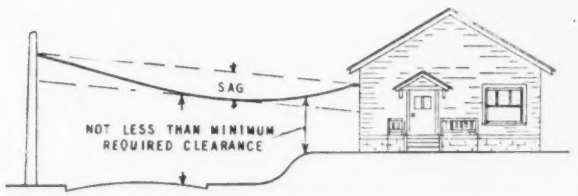
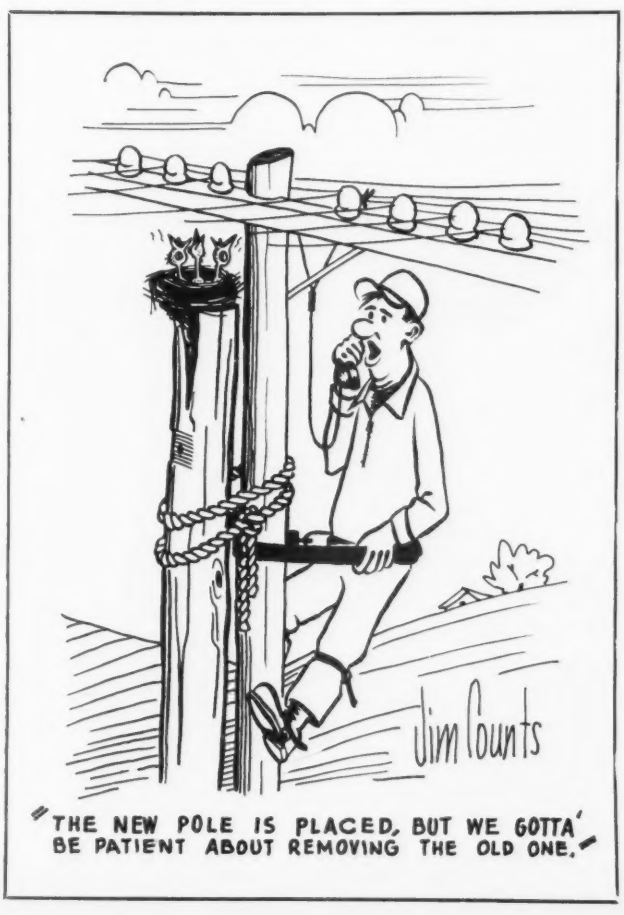


FIG. 11: — Determining amount of sag in drop wire by sighting.

in *Figure* 11. It is preferable to allow a sag value greater than the minimum permitted for the particular length; provided that minimum vertical clearances above the ground or from power service drops are maintained. — *To be continued.*



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Bell System advertising is telling the country about the friendly values of the telephone. For example, there's a current ad entitled "It's fun to phone," in which the laughing lady across the page appears. Millions of readers of national magazines this fall will see her happy face and be reminded that they could enjoy a friendly telephone visit, too, right now.

BELL TELEPHONE SYSTEM

Special Emphasis News Section

★ Section One — "Washington Observations" 30
★ Section Two — "Courts and Commissions" 34
★ Section Three — "Financially Speaking" 41
★ Section Four — "Industry Statistics" 43

"WASHINGTON OBSERVATIONS"

By ROLAND DAVIES and FRED HENCK

Editors of "Telecommunications Reports"

NLRB rules in dispute involving telephone company work assignments and hands down new jurisdictional standards . . . IBEW to seek new labor legislation.

NLRB Rules In Work Assignment Dispute

- **Rules employer is entitled to make work assignments unless he is failing to conform to a bargaining representative certification.**

TWO ACTIONS of particular significance to the telephone industry were taken by the National Labor Relations Board in recent weeks, first when it ruled in a dispute involving telephone company work assignments, and then handed down new jurisdictional standards, including those for the telephone industry.

In the latter case, the Board said it will now exercise its jurisdiction in cases involving telephone and telegraph companies with $100,000 or more gross revenues annually, compared with the former $200,000 standard in effect since 1954.

The Board had proposed changes in its standards in July of this year, noting that the United States Supreme Court had referred to the areas in which the National Labor Relations Board was not asserting its jurisdiction because of the dollar limitations as a "no-man's land."

In the July proposal, the Board had suggested that the standard for telephone companies be $250,000, instead of the former $200,000.

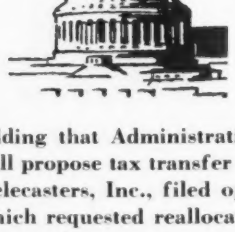
This proposal was strongly protested by the Communications Workers of America, which argued that the Board was broadening the area of "non-jurisdiction" in the telephone field at a time when the Board said it was aiming to bring more workers under its rules and regulations.

At the time it filed its protest, the CWA urged that the Board put a limit of $100,000 on the telephone industry standard and it was exactly this figure that the Board eventually came up with.

In the other recent NLRB action, the Board ruled that the International Brotherhood of Electrical Workers was not entitled to carry on "jurisdictional strife" by having its electrician members walk off jobs when employes of the Southern New England Telephone Co. began pulling telephone wires or cables through conduits.

The NLRB said it was not assigning the disputed work to telephone employes, but that an employer is entitled to make work assignments un-

PRESS-TIME BRIEFS



FURTHER INDICATION that Administration intends to pursue in Congress next year the proposal that part of excise tax on local telephone service be transferred to states was given last month by Dr. Arthur S. Flemming, Sec. of Health, Education & Welfare. Dr. Flemming, stressing need for "sustained and vigorous attack on water pollution," urged stronger support from states in carrying out such a program, adding that Administration, in order to spur increased activity on state level, will propose tax transfer at next session of Congress. . . .Association of Maximum Telecasters, Inc., filed opposition with FCC to petition of Lenkurt Electric Co. which requested reallocation of UHF television frequencies between 840 & 890 megacycles to common carrier fixed communication service. Telecasters asked Commission either to deny Lenkurt petition or defer consideration of request until FCC's upcoming proceedings studying present & future uses of spectrum between 25 and 890 megacycles are concluded.

less he is failing to conform to a bargaining representative certification, or unless the claimant union "has an immediate or derivative right under an existing contract" to the work. Neither of these conditions existed to support the IBEW claim in Connecticut, the NLRB held.

The work stoppage which led to the Southern New England company filing unfair labor practice charges against the IBEW occurred at an addition being built at Yale University. IBEW electricians left the job when SNET employes appeared on the scene to pull cables. At the request of Yale, the telephone employes left the premises until the electrical work was completed, and then returned later to do the telephone job.

In its action, the board went beyond the immediate dispute, concluding that it should "broaden" its decision "so as to provide protection to all employers within the geographical jurisdiction of (IBEW) Local 90 from an unwarranted continuation of this jurisdictional strife." The NLRB action could have broader implications in the future.

IBEW To Seek New Legislation

- **Union endorses proposal that union seek legislation establishing a federal agency to handle labor disputes in telephone industry.**

ON THE subject of labor union developments in the telephone industry, the International Brotherhood of Electrical Workers has formally endorsed a proposal that the union seek legislation establishing a federal agency to handle labor disputes in the telephone industry.

The IBEW Executive Council gave its backing in early 1957 to a suggestion that such an agency be established along the same lines as those provided for the railroad industry under terms of the Railway Labor Act. At the recent quadrennial convention of the union, the delegates had their first opportunity to act on the proposal and they approved the Executive Council decision.

The delegates rejected a suggestion that IBEW President Gordon M. Freeman present the proposed Communications Labor Act to the AFL-CIO Executive Council for its endorsement, but did approve a plan whereby "the means for implementing the purpose" of the resolution "should be left to the discretion of International President."

(Members of the AFL-CIO Executive Council include Joseph D. Keenan, Secretary of the IBEW, and Joseph A. Beirne, President of the Communications Workers of America. The latter has taken a stand in opposition to the proposed Communications Labor Act, and any request for AFL-CIO Executive Council consideration of the proposal would undoubtedly result in differing opinions.)

"New Concept In Personal Hygiene"

- **Protecto Co. asks FCC to direct So. Bell to cease and desist from barring attachment of patented mouthpiece to telephones.**

ONE OF THE most unusual complaints to come before the Federal Communications Commission in some time involves a "new concept in personal hygiene" in connection with the use of an attachment to telephones.

The Protecto Co., Atlanta, Ga., has asked the Commission to direct the Southern Bell Telephone & Telegraph Co. to cease and desist from barring the attachment to its telephones of a patented mouthpiece designed to filter out bacteria and germs.

While Southern Bell is preventing the use of germ-free telephones, the Atlanta company contended, it also is standing in the way of commercial promotion by firms which otherwise might supply replacement filter sheets to Protecto users, imprinted with the suppliers' advertising.

Protecto President Marshall Perry attached to his letter to the Commission a copy of a letter from Eastern Air Lines, which had been giving consideration to furnishing the filter replacements. Eastern said that since it had been advised that Southern Bell prohibits use of the Protecto as a foreign attachment, it could not give further consideration to the idea.

Mr. Perry asked that Southern Bell and the parent American Telephone & Telegraph Co. be directed by the FCC to show on what legal authority the telephone companies base their action. The letter is being forwarded to the telephone companies for their comments.

The informal request to the FCC cited the ruling of the United States Circuit Court for the District of Columbia in the Hush-A-Phone case. As a result of the court verdict, the Commission ruled that use of the Hush-A-Phone, as a device which suits the telephone users' convenience without endangering telephone property, service, or employes, could not be barred as a foreign attachment. Protecto said its product falls into the same category as the Hush-A-Phone.

Fred C. Alexander Named to OCDM Post

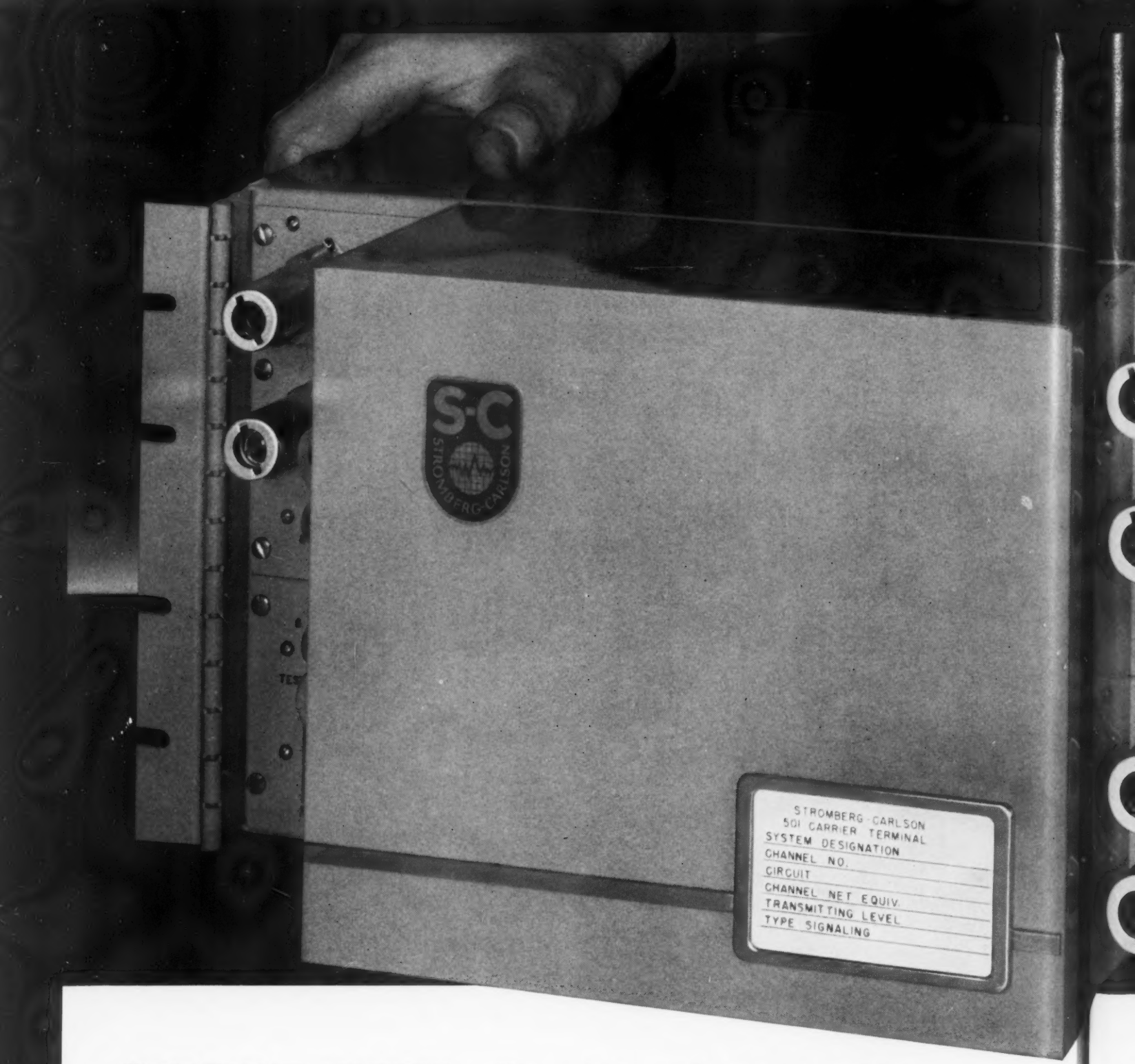
- **OCDM Director Leo A. Hoegh names Alexander Deputy Assistant Director of OCDM for Telecommunications.**

IN THE "second step" of the consolidation of the former Office of Defense Mobilization and Federal Civil Defense Administration into the new Office of Civil & Defense Mobilization, Fred C. Alexander has been appointed Deputy Assistant Director of OCDM for Telecommunications by OCDM Director Leo A. Hoegh.

Also among the 16 deputy assistant directors appointed by Governor Hoegh — in the "first step" of the consolidation several assistant directors were named — was Brig. Gen. Wendell H. Duplantis (USMC, ret.), who will serve as Deputy Assistant Director for Communications & Warning in Battle Creek, Mich., which has been the FCDA headquarters.

Effect of the action by Governor Hoegh, which had been awaited for some time, is to permit both areas of communications now housed in the merged OCDM to continue operating as they were. Mr. Alexander's group is responsible for telecommunications policy matters and advising the President on communications mat-

Please turn to page 48



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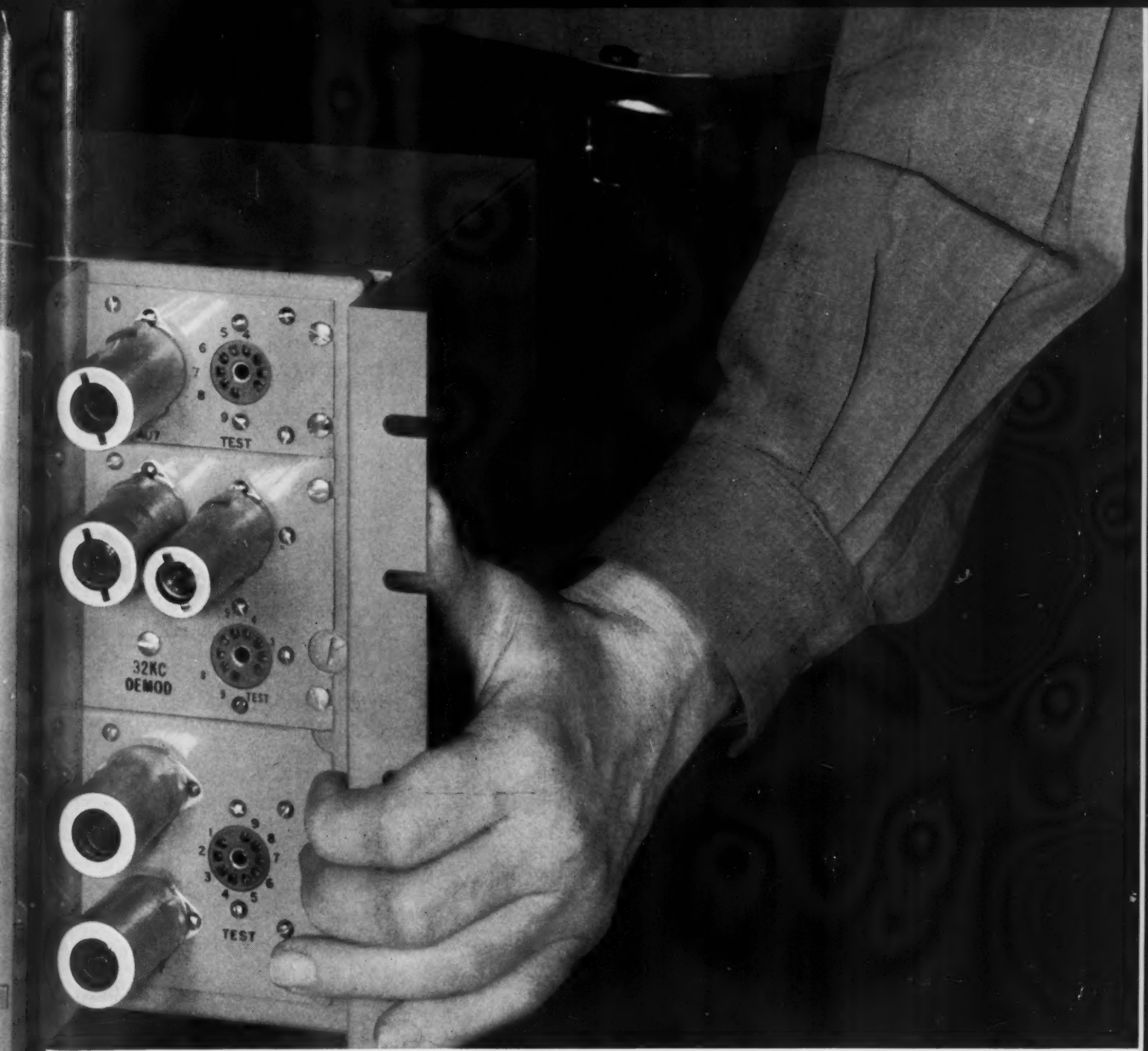

regulation and/or crystal control; simple conversion from ringdown to dial or 2-wire to 4-wire operation by wire strapping. Ask your Stromberg-Carlson representative to prove that "501" is your best buy.

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Part Two—Special Emphasis News

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★ **Reimbursement Law Attacked In N. Dakota** 34
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★ **Louisiana PSC Considers Telephone Tax Proposal** 38

"COURTS and COMMISSIONS"

By JOHN G. REYNOLDS

Managing Editor, "Telephone Engineer & Management"

Utility group starts campaign for law to permit use of public funds for payment of costs of relocating facilities when caused by highway construction . . . N. W. Bell starts "friendly suit."

Reimbursement Law Asked In Washington

- **Utility group launches campaign to permit use of public funds to relocate facilities when necessitated by highway construction.**

A CAMPAIGN has been launched by public utilities (Sept. 19) for enactment of a Washington state law to permit use of public funds to relocate their facilities when necessitated by highway construction.

Noting that the state has already agreed to pay the relocation costs of municipally-owned utilities in Seattle and Tacoma, the public utilities contend that public funds should be used to relocate all utilities, publicly, privately and cooperatively owned. They point out that federal funds are available for payment of up to 90 per cent of relocation costs.

State Highways Director William A. Bugge last March said an estimated $5,000,000 would be spent in relocating municipally-owned facilities along the Tacoma-Seattle-Everett Freeway.

The utility group said it would cost another $5,000,000 to move all utilities, public and private, along the entire freeway. If the relocation costs are not paid off with public funds, the utilities said, rates to consumers are likely to be increased to offset the costs.

Reimbursement Law Attacked In N. Dakota

- **"Friendly law suit" brought by Northwestern Bell against the State Highway Commission requests declaratory judgment setting out rights of parties.**

CONSTITUTIONALITY of a 1957 North Dakota law requiring reimbursement of utility concerns for the cost of moving their facilities when necessitated by interstate highway and defense construction was attack-

CROSS-COUNTRY BRIEFS

NORTHWESTERN TEL. Service Co., Wauseon, Ohio, granted $141,877 annual rate increase by Ohio Public Utilities Commission. Company had asked for 15% more. . . . Pennsylvania Public Utility Commission authorized Commonwealth Tel. Co., Dallas, to set up uniform rates Oct. 1 in move to eliminate discriminatory charges in parts of system & yield additional $10,513 per year in new revenue. Revised schedules affect 2,387 of 54,046 subscribers served by Commonwealth from 72 exchanges in 14 eastern counties. . . . Newspapers report Oklahoma Corporation Commission is expected to hand down ultimatum to four Independent telephone companies operating in Bryan County to either expand service or face loss of their franchises. Attorney Louie Gossett recently represented group of 20 Southeastern Bryan County citizens who met with commission in Oklahoma City, in making a plea for extended and improved telephone service. Bryan County areas include Independent exchanges operated at Colbert by C. K. Davison; at Calera and Achille by Mrs. B. V. Snyder as executrix of the estate of B. V. Snyder; and by Roy Shivers at Yarnaby. United States Independent Telephone Association, commenting on FCC's current study of possible expansion of subsidiary communications activities of FM broadcast stations, last month asked FCC to hold multi-plexed activity to "allied broadcasting activities." Permitting SCA operations for other types of activities, USITA said, "might well create areas of destructive competition to the common carriers on the one hand and the confusion of multi-service regulation on the other." . . .

ed in a suit filed in Burleigh County District Court (Sept. 19) in Bismarck.

The action, described as a friendly law suit, was brought by Northwestern Bell Telephone Co. against State Highway Commissioner A. W. Wentz. The company asked for a declaratory judgment setting out the rights of parties.

An attorney for the Northwestern Bell Telephone Co. said the company hopes to get a judgment declaring the law constitutional, so as to set a precedent for future cases.

State Attorney General Leslie R. Burgum earlier expressed doubt in an opinion that the North Dakota law is constitutional. As a result, Wentz rejected Northwestern Bell's initial bill for reimbursement for moving its pole line as required by the interstate highway construction now under way between Valley City and Jamestown.

Northwestern Bell, a company attorney said, takes the position that the law is constitutional and that its bill should be paid, as should other bills from similar changes in facilities in the future. The company attorney noted that the law applies to sewer, water, light, gas power and pipeline, as well as telephone facilities, regardless of whether the concerns owning them be cooperatives, municipalities, privately or publicly owned.

"No utility is going to profit from this law," declared Earl W. Benser, vice president and general manager of Northwestern Bell. "A company can get back only what it pays out in relocation of its facilities, minus any increase in the value of the relocated facilities and any materials salvaged from the existing facilities."

General of Southwest Announces New Rates

- **New rates set for seven Texas exchanges.**

THE FOLLOWING rate increases became effective in exchanges of General Telephone Co. of the Southwest during the month of August:

Port Lavaca, Texas, (Dial -EAS): Business, 1-Party, from $10.00 to $12.00; Business 2-party from $7.50 to $9.00; Residence, 1-Party from $4.75 to $5.25; Residence, 2-Party from $4.00 to $4.50; Residence 4-Party from $3.50 to $4.00.

Point Comfort, Texas, (Dial — EAS): Business, 1-Party, from $10.00 to $12.00; Business, 2-Party from $7.50 to $9.00; Residence, 1-Party from $4.75 to $5.25; Residence, 2-Party from $4.00 to $4.50; Residence, 4-Party, from $3.50 to $4.00.

Shepherd, Texas (Dial): Business, 1-Party from $8.50 to $9.50; Business, 2-Party from $7.00 to $8.00; Residence, 1-Party from $4.50 to $5.00; Residence, 2-Party from $3.75 to $4.25; Residence, 4-Party from $3.25 to $3.75.

Quitaque, Texas, (Dial): Business, 1-Party from $8.00 to $9.00; Business 2-Party from $6.50 to $7.25; Residence, 1-Party from $4.50 to $4.75; Residence, 2-Party from $3.75 to $4.00; Residence, 4-Party from $3.25 to $3.50.

Turkey, Texas, (Dial): Business, 1-Party from $8.00 to $9.00; Business, 2-Party from $6.50 to $7.25; Residence, 1-Party from $4.50 to $4.75; Residence, 2-Party from $3.75 to $4.00; Residence, 4-Party from $3.25 to $3.50.

Goree, Texas (Conversion to Dial): Business, 1-Party from $7.00 to $9.00; Business 2-Party from $5.25 to $7.50; Residence 1-Party from $3.75 to $5.00; Residence, 2-Party from $3.25 to $4.00; Residence, 4-Party $3.25.

Comanche, Texas (CB-Manual): Business, 1-Party from $7.75 to $9.70; Residence, 1-Party from $4.50 to $5.65; Residence, 4-Party from $3.00 to $3.75.

New Rates OK'd For Breezewood Tel.

- **New rates for Breezewood (Pa.) Tel. Co. will give company $14,900 boost in annual revenues.**

THE Breezewood (Pa.) Telephone Co. hiked rates an estimated $14,900 annually Sept. 1 for 829 customers in Bedford and Fulton Counties, Pa., following commission approval of a new schedule which raised monthly residential rates in amounts ranging from $1 to $2.50 and business rates between $2 and $3.25. The rates vary

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Let's Make All These E

Kellogg's Color Campaign Works With You and For You To Help Sell More Color Phones In Your Community

IT'S A FACT: color phones help convince subscribers of the need for extension phones.

RESULTS: greater revenue for you, greater satisfaction for your subscriber, because the 15 smart new Kellogg K-500 colors brighten up any decor.

And one extension leads to another: a convenient wall phone in the kitchen means dad will want one for the workshop; an extension in the bedroom leads to one in the guest room. Remember to suggest color phones as gifts—it's a new, original idea, and they're always welcome!

Kellogg is helping you sell more color phones through its widely-promoted color campaign. The theme — "Brighten Life At Home With Color Phones"—is being brought to the attention of people everywhere through advertising in national magazines, local newspapers, direct mail and other powerful sales promotion tools.

Your Kellogg sales representative will be glad to explain this campaign to you and show you how it can be brought into operation in your community.

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Communications Division of
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Minneapolis 16, Minn.
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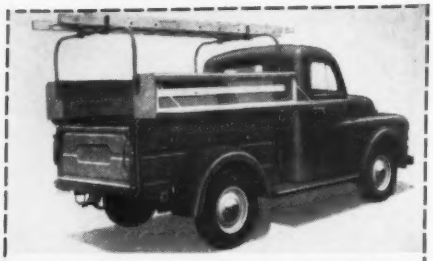

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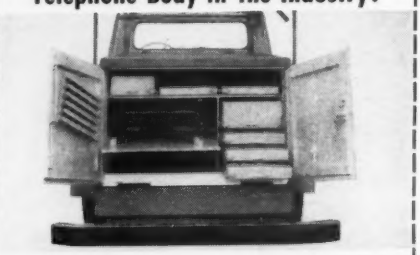

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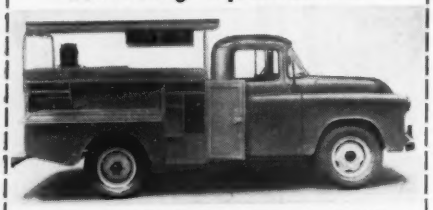

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in the Breezewood, New Grenada and Warfordsburg exchanges.

The firm will also establish charges for two-party residence and business phones in all three exchanges and set up four-party residential rates on the Breezewood and New Grenada exchanges. It will drop four-party business rates in Warfordsburg and multi-party charges in the base areas of Breezewood and New Grenada.

The company said the boost was needed to pay increased costs resulting from the recent conversion to dial operation, which cost $175,000.

Louisiana PSC Considers Telephone Tax Proposal

- **Municipal Association backs proposal that municipalities may levy a gross receipts tax on their respective telephone companies. Companies would have authority to pass tax on to subscribers.**

LOUISIANA'S State Public Service Commisison has been asked by the Louisiana Municipal Association (Sept. 15) to establish a rule on the matter of local taxation of telephone company income.

In New Orleans, meanwhile, Mayor deLesseps S. Morrison said any rate increase there as a result of an additional tax should apply only to New Orleans telephone users.

A resolution adopted by the Association in August approved a proposal that municipalities, at their option, may levy a gross receipts tax on their respective telephone companies. The companies would then have the authority to pass on the additional tax to telephone users in that municipality.

Commission Chairman Nat B. Knight, Jr., said the association resolution had been forwarded to the commission and that "the matter will be handled in due course."

Louisiana Municipal Association President W. George Bowdon Jr. told Knight: "The Louisiana Municipal Association's board felt that there are some cities that are so desperately in need of the increase telephone rates provided they would have the benefit of the increased income from the telephone company.

"Secondly, we felt that the fairest way we knew of to pass the increased cost of telephone service on to its users would be to confine this increased cost to only the cities that have levied additional gross receipt taxes on the telephone company and not to the state in general.

"We understand that many other public service commissions in other states have adopted such a rule and we therefore would like to urge that the Louisiana Public Service Commission adopt a similar rule for our state."

Kentucky Phone Rate Hearings Adjourned

- **Hearings on General Tel. Co. of Kentucky rate bid postponed until Oct. 28. Company seeking to increase rates $1,852,000 per year.**

A KENTUCKY Public Service Commission hearing on General Telephone Company's proposal to increase rates was adjourned (Sept. 22) until Oct. 28 after company witnesses were cross-examined.

Municipalities opposing the rate increase will be allowed further cross-examination at the next hearing. They also will be given an opportunity to submit evidence in support of their claim that the rate increase is not justified, and to submit evidence on the company's service.

Phone Rate Increase Sought In Arkansas

- **General Tel. Co. of S. W. requests rate boost of approximately $422,000 per year.**

AN APPLICATION filed with the Arkansas Public Service Commission (Sept. 23) by General Telephone Co. of Southwest requested a rate increase of approximately $422,000 a year. The company operates in Texarkana, Augusta, Blevins, Cotton Plant, Marvell, McCrory, Taylor, Prescott, Waldron, Waterloo, and Wheatley.

Noting that its present rates produced $1,096,219 on the Arkansas system in the year ended June 20, General Telephone said this was lower than the 6% earning rate allowed by the commisison.

The company's proposed rates would range from as low as $2.50 in some areas to as high as $15 in the larger cities in its system.

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Part Three—Special Emphasis News

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★ Margins Hiked to 90% 43
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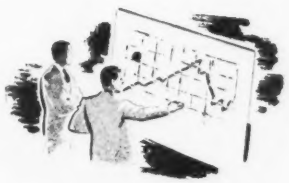

"FINANCIALLY SPEAKING . . ."

Prepared By "TE&M's" Research Dept.

Analysts give reasons for AT&T stock rise . . . Margins hiked to 90% — highest since 1946-47 . . . Bell System adds 700,000 phones in third quarter. Toll calls up 7%.

Analysts Give Reasons For A.T.&T. Stock Rise

● **Investment analysis and forecast of A.T.&T. stock may have sparked move that put stock on top of active list.**

LAST MONTH A.T.&T. stock did an about face as it changed from one of the market's slow performers, began looking like a growth stock and hid 195½ the highest price since '46.

Reasons for the heavy buying had some experts stumped. But David J. Greene & Co., 72 Wall St., New York City, a member firm of the New York Stock Exchange, came up with and distributed an investment analysis and financial forecast of American Tel. & Tel. which traced the company's earnings record, financial requirements and financing program for the last 10 years and projected the trends into the future.

The story pointed up these facts: — (1) Too much stock and convertible debentures in the last 10 years have held down per-share earnings; (2) in the next five years the situation should be reversed; the supply of new stock coming to market should drop, the per-share earnings should increase, and the stock should sell at a much higher price-earnings ratio than previously; and said "the company will have to consider either an increased dividend or a stock split. . . ."

Those in the know believe the report of David J. Greene & Co. was a primary cause for A.T.&T. stock moving onto the active list. They have two reasons: — (1) Market impact of a corporation study usually strikes before the study becomes public property; and (2) it is the practice of brokerage houses, and securities

"FINANCIAL NOTES"

REVENUES OF General Tel. Corp. in 12 months' ended Aug. 31 rose to $308.5 million from $279.1 million year ago. Net income totaled $47.1 million, or $3.07 share, compared with $46.4 million, or $3.18 share, in similar period of 1957 . . . . New sequel to latest round of short-term rate increases was steep jump in interest rates banks pay for time deposits; it was defensive step against diversion of some of those deposits into investment market . . . . On the West Coast, S. Clark Beise, pres., Bank of America Nat'l. Trust & Savings Assoc. told press conference — "with existing bank reserves fully employed any further increase of substantial proportions in demand for credit probably would produce higher money rates than those now ruling." . . . . Personal income rose again in Sept., reaching seasonally adjusted annual rate of $357.5 billion. September's pace gained $1.4 billion over Aug., with most of increase due to higher wage & salary payments, Commerce Department reported. For first nine months of 1958, personal income ran at $351.6 billion yearly — $4.1 billion above the 1957 rate . . . . Issuance of common stock with par value of $305,000 by United Tel. Co., Monroe, Wis., has been approved by Wisconsin Public Service Commission. Petition stated stock issue would be used to finance $200,000 stock dividend and to retire debts.

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firms, to show findings of important studies to partners and customers first, thus giving them the opportunity to move before the data becomes public.

Margins Hiked to 90%; Highest Since 1946-1947

- **Federal Reserve Board announces all new transactions will require 90% cash down payments. Margin requirement is highest since '46-'47 when 100% was required.**

LAST MONTH margin requirements for purchasing and selling listed securities were raised close to a cash basis as the Federal Reserve Board announced that all new transactions would require cash down payments of 90%. This is the highest since 1946-47 when a 100% requirement was in effect.

The 70% rate had been effective since Aug. 4 when the requirement was raised from 50% in effect since Jan. 16 of this year.

The Federal Reserve's official spokesman, in announcing the change, would make no comment on the board's view of the current level of stock prices.

Aside from the post-World War II period of slightly longer than one year when the 100% margin prevailed, margins have never been as high as 90%. This is the first time there has been a 90% rate.

The Federal Reserve, which has the power to change margins — the percentage of cash down payment which must be made on stocks — theoretically does not concern itself with stock prices but only with the degree of credit which is being used to carry securities.

The increase in credit in the market since last Aug. 4, when margins were raised from 70 to 90%, has been relatively slight, however.

Total broker and bank loans to customers for the purpose of carrying listed securities has risen about $100 million since the end of August. It declined during the month of August, following the increase that month in margin requirements, but began rising again in September. The net increase since the beginning of August has been on the order of only $50 million.

Nevertheless, broker and bank credit to customers was at a record level

Please turn to page 46

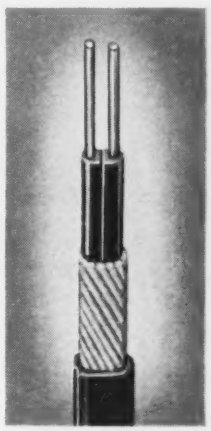
Dividends Reported

To obtain prompt publication of your company's Dividend Announcement, please airmail four copies to TELEPHONE ENGINEER & MANAGEMENT, 7720 N. Sheridan Rd., Chicago 26, Ill.

Company	Period	Amt.	Payable Date	Record Date
American Tel. & Tel.	Quar.	$2.25	10-10-58	9-10
Calif. Water & Tel. (com.)	Quar.	.30	11-1-58	10-10
Calif. Water & Tel. (Pfd. $1 Series)	Quar.	.25	11-1-58	10-10
Calif. Water & Tel. (Pfd. $1.20 Series)	Quar.	.30	11-1-58	10-10
Calif. Water & Tel. (Pfd. $1.24 Series)	Quar.	.31	11-1-58	10-10
Calif. Water & Tel. (Pfd. $1.25 Series)	Quar.	.31¼	11-1-58	10-10
Calif. Water & Tel. (Pfd. $1.32 Series)	Quar.	.33	11-1-58	10-10
S. W. States Tel. (Com.)	Quar.	.30	12-1-58	11-10
S. W. States Tel. (Pfd. $1.28)	Quar.	.32	12-1-58	11-10
S. W. States Tel. (Pfd. $1.32)	Quar.	.33	12-1-58	11-10
S. W. States Tel. (Pfd. $1.44)	Quar.	.36	12-1-58	11-10
Sunland-Tujunga Tel. (Pfd.)	Quar.	.50	11-1-58	10-20
Sunland-Tujunga Tel. (Com.)	Quar.	.50	11-10-58	10-20
West Coast Tel. (Com.)	Quar.	.28	12-1-58	11-10
West Coast Tel. (Pfd. Conv. $1.44)	Quar.	.36	12-1-58	11-10
Western Light & Tel.	Quar.	.50	11-1-58	10-17
Western Light & Tel. (5% Pfd.)	Quar.	.31¼	11-1-58	10-17
Western Light & Tel. (5.2% Pfd.)	Quar.	.32½	11-1-58	10-17

A roaring success: TELEPRENE by Whitney Blake

About 12 years ago Whitney Blake Company introduced TELEPRENE, one of the first neoprene jacketed drop wires offered to the Independent Telephone Industry. Before TELEPRENE, the average life of a drop wire was seven years. The first TELEPRENE drops were installed about 12 years ago and are *still in service* showing no appreciable signs of deterioration.



A "cheap" wire that needs frequent replacement, that causes service interruptions, calling for emergency service, is far from cheap . . . it is the most expensive wire you can buy.

It is now, and always has been, the policy of Whitney Blake to make *better*, not *cheaper*, wire. The same high quality is built into every product bearing the Whitney Blake name.

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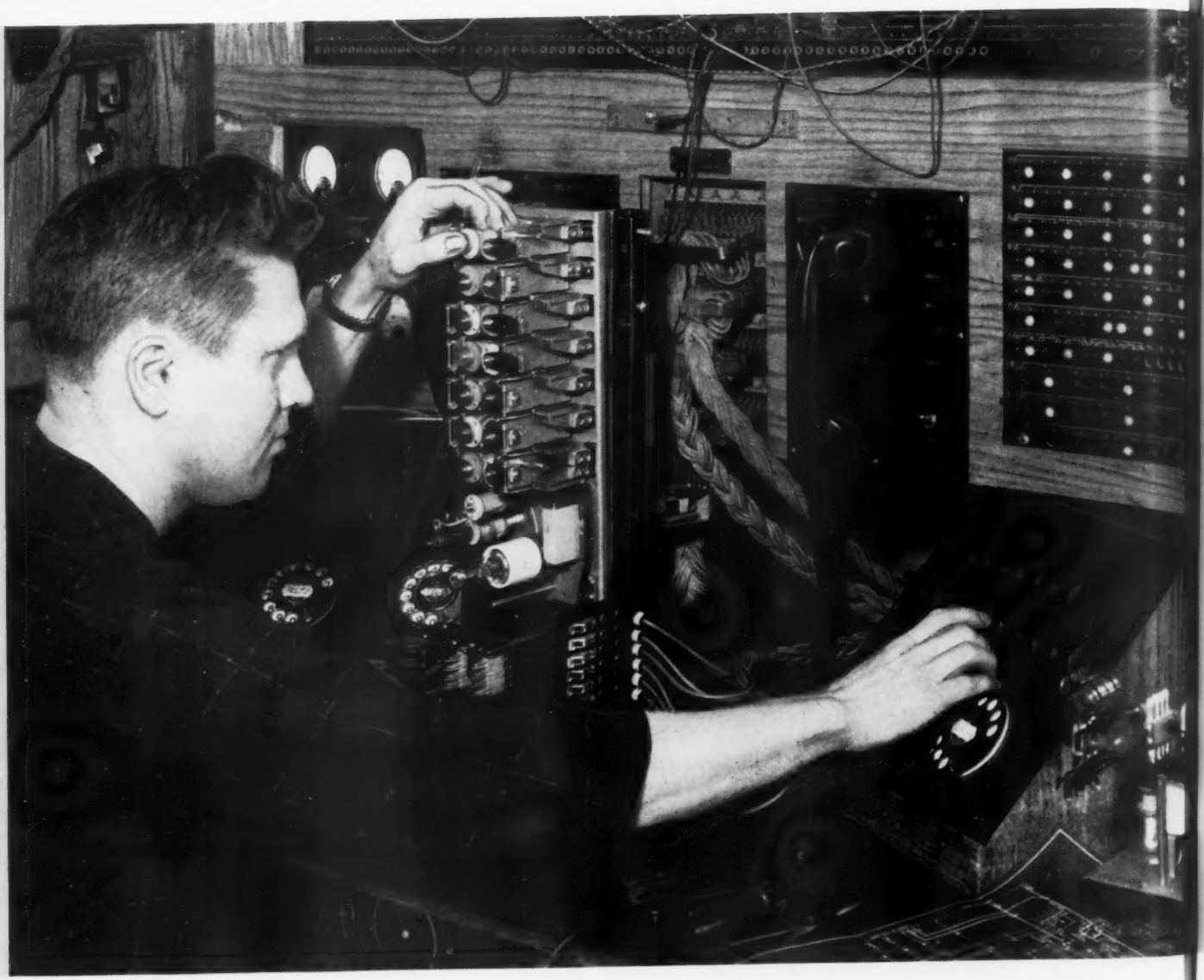

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Purchaser	Seller	No. of Stations	Sale Price
BEK Tel. Mutual Aid Corp. Steele, N. D.	Northwestern Bell Tel. Co. Exch. at Strasburg, N. D.	(Not Given)	$22,500
Champaign County Tel. Co. Champaign, Ill.	Seymour Tel. Co. Seymour, Ill.	(Not Given)	(Not Given)
Marshall County Tel. Co. Minneapolis, Minn.	Oslo Tel. Co. Oslo, Minn.	(Not Given)	(Not Given)
Midland Tel. Co. Modesto, Ill.	Fayette Co. Mut. Tel. Co. Sefton, Ill.	(Not Given)	(Not Given)
Palestine Tel. Co. Palestine, Ill.	Hutsonville Tel. Co. Hutsonville, Ill.	(Not Given)	$56,000
Red River Rural Tel. Assoc. Abercrombie, S. D.	Skree Mutual Tel. Co. Hawley, Minn.	62	(Not Given)
Red River Rural Tel. Assoc. Abercrombie, S. D.	Andrews Tel. Co. Hawley, Minn.	57	——
Smithville Tel. Co., Inc. Ellettsville, Ind.	Greene County Tel., Lyons; Griffin Tel. Corp.; Hymera Tel. Co.; Lizton Tel. Co.; Goldsmith Co-op. Tel. Co.; Sharpsville Tel. (Companies formerly owned by Max Hosea)	(Not Given)	(Not Given)

of $4.3 billion at the end of September.

The net debit balances of brokers and bank loans to customers for the purpose of carrying listed securities have moved in opposite directions since August — though both are up compared with the beginning of this year.

Brokers loans have increased by a net of 20% since Jan. 1 and by 2½-3% since the end of July.

Bank loans for security purchases have risen 8% since the first of the year, but declined 4% since the end of July.

A.T.&T. Continues To Record Gains

- **Kappel reports Bell system added 700,000 phones in third quarter.**

SUBSTANTIAL gains in telephone business in the third quarter of 1958 was reported last month by Frederick R. Kappel, president of American Telephone & Telegraph Co.

In a message to stockholders, he said the Bell System (the parent A. T. & T. and its principal operating telephone company subsidiaries) had added an estimated 700,000 new telephones in the three months ended on Sept. 30. Kappel called this the largest quarterly gain this year.

Long distance calls during the pe-

Summary of Earnings Reports

A summary of telephone corporation earnings reports appears below. To insure prompt listings of your company's report in this department please air mail four copies of report to TELEPHONE ENGINEER & MANAGEMENT, 7720 N. Sheridan Rd., Chicago 26, Illinois.

Company	Period	Net Income 1958	Net Income 1957	Per Common Share 1958	Per Common Share 1957
Amer. Tel. & Tel. (only)	3 mos. 9/30	$189,400,000	$173,242,305	(1) 2.71	(1) 2.69
Amer. Tel. & Tel. (only)	12 mos. 9/30	729,210,000	670,318,337	(1) 10.96	(1) 10.58
Amer. Tel. & Tel. & Subs.	3 mos. 8/31	248,062,698	205,805,728	(1) 3.56	(1) 3.22
Amer. Tel. & Tel. & Subs.	12 mos. 8/31	893,831,392	815,884,290	(1) 13.53	(1) 13.00
Bell Tel. of Penna.	8 mos. 8/31	30,363,017	28,768,113	——	——
Calif. Water & Tel.	12 mos. 8/31	2,866,400	2,647,600	(2) 1.52	(2) 1.61
Mt. States Tel. & Tel.	3 mos. 8/31	8,985,004	7,682,073	2.56	2.19
Mt. States Tel. & Tel.	12 mos. 8/31	32,038,646	28,262,149	9.14	8.06
New England Tel. & Tel.	8 mos. 8/31	26,229,476	19,683,429	——	——
Southern New England Tel.	8 mos. 8/31	11,524,866	7,745,895	——	——
Southwestern Bell Tel.	8 mos. 8/31	70,314,576	67,012,932	——	——
S. W. States Tel.	12 mos. 8/31	1,417,700	1,300,600	(2) 1.61	(2) 1.71

(1) Based on average number of shares outstanding during the period.
(2) On shares outstanding at close of period.

riod ran more than 7% ahead of the 1957 traffic, Kappel reported.

Net income of A. T. & T. for the three months ended on Sept. 30 (with September partly estimated) was $189,400,000, equal to $2.71 a common share on 69,900,000 average shares outstanding. In the 1957 period the net was $173,242,305, or

REA Telephone Loan Report

Company Name & Location	Amt. of Loan	Planned use of Loan Funds
Lismore Co-op Tel. Co. Lismore, Minn. John F. Hebig, Pres. Oscar Didier, Mgr.	$164,000	New borrower plans improved service for 321 existing subscribers; new service for 33 farm families; new dial office at Lismore.
Mid-Rivers Tel. Co-op. Circle, Mont. Everett Hill, Pres. B. R. Allen, Mgr.	159,000	With $2,379,000 in REA loans Co-op plans service to 2,567 rural subscribers. Completed system will consist of 14 exchanges, 2,714 miles of line.
Nash Tel. Co. Damariscotta, Maine G. M. Hutchinson, Pres. & Mgr.	295,000	REA loans totaling $882,000 will enable borrower to provide new or improved service to 2,056 subscribers. System has 5 exchanges in operation.
Hardin County Tel. Co. Rosiclare, Ill. R. F. Benson, Pres.-Mgr.	1,072,000	New borrower will furnish initial service to 1,246 families & improve service for 776 existing subscribers. It proposes to issue stock for properties of Pope County Tel. Co., Robbs, Ill.
Burnet Tel. Co. Burnet, Texas J. B. McDuff, Pres. J. L. Luther, Mgr.	175,000	REA loans totaling $760,000 will provide new or improved service to 1,627 farm subscribers. System will operate 422 miles of line & 5 exchanges.
Telephone Utilities of W. Va., Inc. Webster Springs, W. Va. Harold G. Payne, Pres.-Mgr.	1,388,000	New borrower plans initial service for 1,396 rural families & improved service for 1,179 existing subscribers. Borrower will acquire Webster Springs (W. Va.) Tel. Co.
East Otter Tail Tel. Co. Perham, Minn. Royale B. Arvig, Pres. & Mgr.	$990,000	REA loans now totaling $2,120,000 will bring new & improved service to 4,759 subscribers over 1,339 miles of line. System will have 11 exchanges.
Consolidated Tel. Co. Brainard, Minn. Edwin O. Swanson, Pres. David Kocka, Mgr.	52,000	REA loans to borrower now total $1,079,000. System will provide new & improved service to 1,789 rural subscribers. It will operate 8 exchanges and 774 miles of line.
Atlantic Tel. Membership Corp. Shallotte, N. C. Harry L. Mintz, Jr., Pres. F. L. Brown, Mgr.	241,000	REA loans to borrower now total $662,000. Completed system will serve about 984 rural subscribers. It will operate 277 miles of line and two exchanges.
Lawrence Tel. Co. Lawrence, Mich. Ray T. Allen, Pres. R. L. McGowan, Mgr.	279,000	REA loans to borrower now total $533,000. System will consist of 3 exchanges and serve 1,457 rural subscribers.
Cornersville Tel. Co. Cornersville, Tenn. M. R. Childress, Pres.-Mgr.	46,000	REA loans totaling $227,000 will be used to bring new and improved service to 500 rural subscribers. System will operate 1 exchange and 97 miles of line.
Four States Tel. Co. Brownwood, Texas C. H. Loveland, Pres. D. T. Strickland, Gen. Mgr.	635,000	New REA borrower will use loan funds to furnish new service to 388 rural families and improve service for 747 existing subscribers. System will consist of 3 exchanges & 471 miles of line.
Sunflower Tel Co. Leoti, Kansas Howard Puckett, Pres.	724,000	REA loans totaling $1,361,000 will enable borrower to provide new and improved service to 2,095 rural subscribers. System will consist of 5 exchanges and 1,143 miles of line.
Johnson Tel. Co. Remer, Minn. Gilroy Arvig, Pres. E. V. Johnson, Mgr.	16,000	REA loans to borrower now total $248,000. System will consist of 171 miles of line and serve 422 rural families.
South Plains Tel. Co-op. Lubbock, Texas G. F. Sooter, Pres. C. M. Means, Mgr.	248,000	REA loans totaling $1,914,000 will enable borrower to provide new & improved service to 2,500 rural subscribers. System will consist of 15 exchanges and 1,648 miles of line.

$2.69 a share on 64,497,723 shares outstanding.

In the twelve months ended on Sept. 30, net income was $729,210,000, or $10.96 a share on 66,535,000 average shares outstanding during this period. In the comparable period a year earlier, the net stood at $670,318,337, or $10.58 a share on 63,371,109 shares outstanding.

Combined operating revenues of the Bell System in the three months ended on Aug. 31 were $1,693,657,493 against $1,584,902,669 in the 1957 period. Operating revenues for the twelve months ended on Aug. 31 were $6,590,567,294, compared with $6,156,958,431 a year earlier.

Operating revenues for A. T. & T. alone for the three months ended Sept. 30 were estimated at $120,690,000, against $113,674,800 a year earlier. For the 12 months ended Sept. 30, operating revenues were $480,020,000 compared with $455,163,623 a year before.

Commonwealth Tel. Co. Sells Two Issues Privately

- **Pennsylvania company placement consists of $2,000,000 4 1/2% 1st mtg. bonds and 7,500 shares of 5 1/4% preferred.**

LAST MONTH Commonwealth Telephone Co., Dallas, Pa., privately placed two new issues.

The placement consisted of $2 million 4½% first mortgage bonds, due 1983, and 7,500 shares ($750,000) of 5¼% preferred stock, $100 par. Eastman Dillon, Union Securities & Co. arranged the sale.

The Pennsylvania company will use the proceeds to repay bank loans and for its construction program.

1958 Electronics Output Will Approximate $6.9 Billion

- **1958 output of electronics equipment and components is expected to be $100 million less than '57.**

THE 1958 factory output of electronic equipment and components—exclusive of research and development expenditures — is expected to be around $6.9 billion, or about $100,000,000 less than the 1957 record, the Business & Defense Services Administration's Electronics Division reported last month.

There has been an upturn since midyear, but a poor first half is responsible for the 1958 decline, the first year since the advent of television in which total electronics product output will not have increased.

Mountain States Reports Toll Calls Up 6% from '57

- **Mountain States Tel. gains over 78,000 phones in 1st 18 months.**

MOUNTAIN States Telephone & Telegraph Co. gained over 78,000 telephones in the first eight months of this year, about the same as that in the comparable period of 1957, President Walter K. Koch said in a quarterly message to stockholders last month.

Koch also reported that long distance calls are up 6% this year, compared to 1957. Earnings for the three months ended Aug. 31 were $2.56 per share.

SNET Reports "Upturn" In Rate Of Growth

- **Southern New England Tel. Gains 16,000 phones in 3rd quarter. Toll cases 3% ahead of '57.**

A "SIGNIFICANT UPTURN" in the rate of growth of Southern New England Telephone Co. occurred during the past three months, President Lucius S. Rowe said last month in his quarterly report to stockholders. In the third quarter, the company added 16,000 telephones, compared with 14,000 in the same period of 1957, reversing the pattern of the first six months, when the company gained only 17,000 stations against 30,000 during the first half of last year.

Also reporting that toll calling during the first nine months of 1958 was 3% ahead of 1957, Rowe commented that "Our business can be related almost directly to the ups and downs of general business conditions in the state. The brightening signs in the Connecticut picture indicate increasing telephone growth ahead."

Earnings in the first nine months of 1958 totaled $1.91 per share, compared with $1.63 for the same period of 1957.

Gray Stock Interest Transferred to Western Union

- **Gray Mfg. Co. transfers one-sixth stock interest to Western Union.**

TRANSFER of a one-sixth stock interest in the Gray Manufacturing Co., Hartford, Conn., a producer of a wide range of electronic instruments and devices, to the Western Union Telegraph Co. was formally carried out Wednesday, Oct. 15. Gray exchanged 60,000 shares of its stock for 20,000 shares of Western Union stock.

"Washington"

(Concluded from page 31)

ters, while General Duplantis' organization operates in the area of warning networks and civil defense communications matters, including the program of federal matching funds for local governments' purchases of warning and communications equipment.

Responsibilities of Mr. Alexander's organization, as first spelled out in an executive order June 17, 1953, and since essentially unchanged, include: coordinating developments of telecommunications policies and standards in the executive branch of the government; assuring high standards of telecommunications management within the executive branch; coordinating mobilization plans as they relate to telecommunications; operations of the Interdependent Radio Advisory Committee in assigning radio frequencies to government agencies; and developing United States government frequency requirements.

In another executive order April 17, 1957, the ODM Director was granted some of the President's wartime powers dealing with communications, including the provision of a system of priorities for the use of telephone and telegraph systems, for the resumption of intercity private line service following interruption, and for the effective use of communications for the purpose of national defense. — *Roland Davies & Fred Henck.*

Traffic's "Crystal Ball"

(Continued from page 23)

In other words six minutes is the initial period during the "Late Night" rate period where three minutes would apply for the "Regular Night" period. Overtime will also be at half price — two minutes for the rate for one minute during the "Regular Night" period.

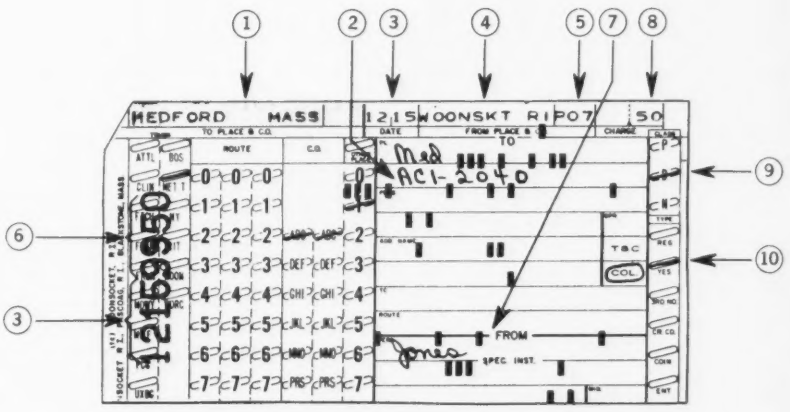
Another feature of newer toll rates is that the overtime rate for one minute is to the nearest cent, one third of the three minute initial period rate. This should make computation of charges easier and faster and should be more readily understood by customers. It may also add revenue.

Almost all new toll rates increase the person-to-person and collect rate while reducing or holding firm on station-to-station paid rates. This is all aimed at better utilization of equipment around the clock, thereby avoiding investment in more positions, switching equipment and toll lines to carry peak loads at very little higher dollar volume than can be achieved by night usage.

"Specialized Calls"

UNDER THE better utilization of equipment and certainly under the heading of better service we will find, without a doubt, a better trained more highly skilled specialist known as the operator. As vast sums are spent to mechanize as much traffic handling as possible and to speed all calls, the remaining calls directed to operators will tend to become specialized calls. ***Please turn to page 50***

COLLECT CALL - WOONSOCKET, R.I. TO MEDFORD, MASS.
AFTER TICKET INTERPRETED AND CUT BY ACCOUNTING



1. Called place.
2. Called (Billing) number.
3. Date of call - December 15.

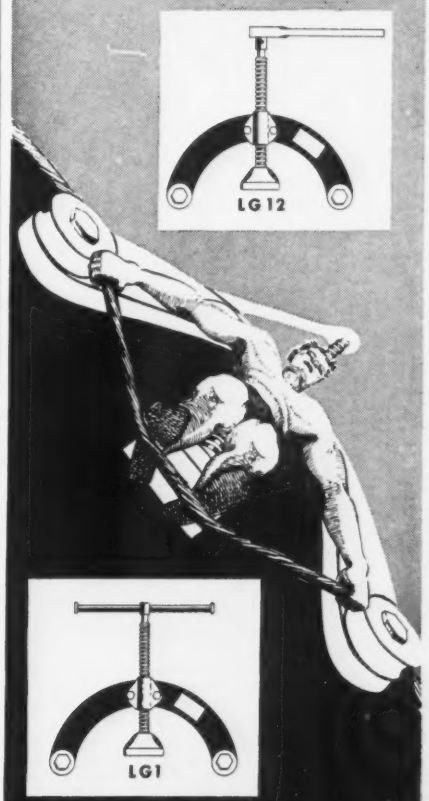
   Note: 4 digits are always used for the date. For example, March 2 would be shown as 0302.

4. Calling place.
5. Calling central office.
6. Calling line number.
7. Calling customer.
8. Charge for call.
9. Class of call - station day.
10. Charges accepted by called number.

FIGURE FOUR: — Collect call — Woonsocket, R. I. to Medford, Mass. after ticket interpreted and cut by Accounting.

LITTLE Giant
SLACK PULLER

For pulling slack in a messenger you need a man with the strength of Hercules, the ruggedness of Atlas, the speed of Mercury . . . or a Little Giant Slack Puller.



If you need to pull slack in a messenger for any reason, either of the Little Giant Slack Pullers, the LG1 slip handle or the LG12 ratchet handle will do the job Quick, Easy and Safe.

WRITE OR PHONE

SERVING THE GROWING INDEPENDENT TELEPHONE INDUSTRY
CABLE SPINNING EQUIPMENT CO.
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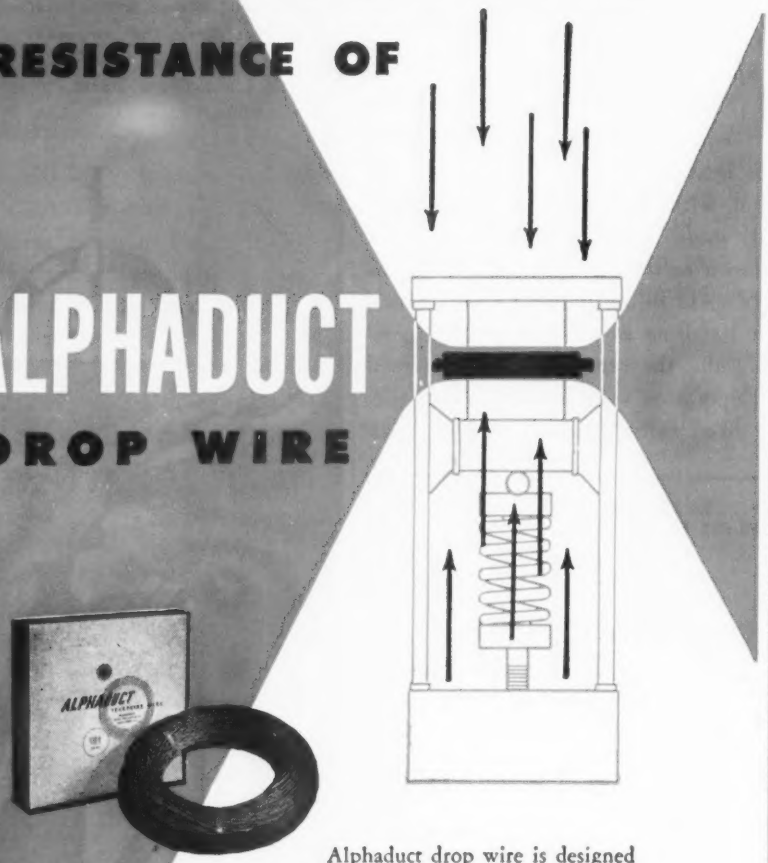
1500 pounds

MINIMUM COMPRESSION RESISTANCE OF

ALPHADUCT

DROP WIRE



Alphaduct drop wire is designed and built to be the longest lasting drop wire you've ever installed. It's tested . . . completely, thoroughly and often to make sure that every single coil is up to Alphaduct's rigid standards.

Here's how the insulation is tested to make sure it won't crush.

Short lengths of Alphaduct are placed between the steel plates of a compression testing machine. These plates are then forced together at uniform speed until the insulation crushes. Alphaduct parallel drop wire has to withstand a minimum load of 1500 pounds before it breaks. Each conductor of Alphaduct twisted pair will withstand a 1000 pound pressure.

You don't have to worry about a little rough handling breaking down this kind of tested insulation. Try Alphaduct drop wire. It's dated, so you can see for yourself the extra wear it provides.

ALPHADUCT WIRE AND CABLE COMPANY • NEW BRUNSWICK, N.J. NATIONAL DISTRIBUTORS • AUTOMATIC ELECTRIC SALES CORP., NORTHLAKE, ILLINOIS • LEICH SALES CORPORATION, CHICAGO, ILLINOIS. REGIONAL DISTRIBUTORS • PANKEY SUPPLY CO., CHARLOTTESVILLE, VA. THE LINDSAY TELEPHONE SUPPLY CO., NORTHFIELD, OHIO

This may be true even though we will make every effort to eliminate complicated procedures. Operators will be using vast amounts of expensive equipment. It is unthinkable that we can let poorly trained people tie up or slow down expensive equipment. Therefore in the future more complete and intensive training programs will be used in all traffic offices. Many more training aids will be used.

Naturally these training programs and training aids will cost money, but not as much as training at a regular position which takes costly equipment out of regular service and therefore generally must be done during low traffic hours often on premium pay. If it is not already, training will become the most important function of any one in a supervisory capacity in traffic.

Mechanization Possibilities

NOW JUST a look at the real crystal gazing part. Mechanization of services or functions not previously considered profitable or possible.

Centralized Rate and Route at a primary center for all toll centers within 35 miles or even further — perhaps all those toll centers using the primary center and therefore using the same route as this center is feasible. For example. Lancaster, Ohio, is now using the Columbus Route Desk.

Consider centralization of information on the same basis. Here personal directories might be considered with all other directory work done at a central location. Studies by New York Telephone Co. show that the average New York residence telephone subscriber regularly calls about 25 other numbers. Giving all residence subscribers these numbers and supplying others at an expanded information bureau may be cheaper than furnishing all residence subscribers wtih huge directories.

In the ultimate, information and intercept service may be furnished by electronic memory systems. This is feasible now for intercept but the spelling of names may be the hold up on information usage.

Toll supplementary peg counts can

be made by first microfilming toll tickets. An operator runs the film and drops a prepunched card for each item of work in a bin. Mechanical sorting and tabulation gives you your toll co-efficient.

Dial peg counts may be mechanized. Manual reading of meters is very time consuming. A camera may be used to photograph a group of meters, the film is viewed and the results key punched on cards. Sort and tabulate and you have busy hour and busy season information. A photograph requires a few seconds time while reading a large number of meters requires many minutes. The more meters that can be included in one photograph, the greater the saving in reading cost is in proportion to the cost of a photograph.

Dial line assignment can be done on punched cards. The advantage is that an equipment report can be produced at any time by machine tabulation of the cards.

Personal Radio Signaling Service using what the independent manufacturer calls "Pagemaster" has been tried by the Bell System at Allentown, Pa. Initial tests were started at Columbus, Ohio, in April of 1958. Since the tests were successful, the necessary tariffs were filed and the service offered in the Columbus area

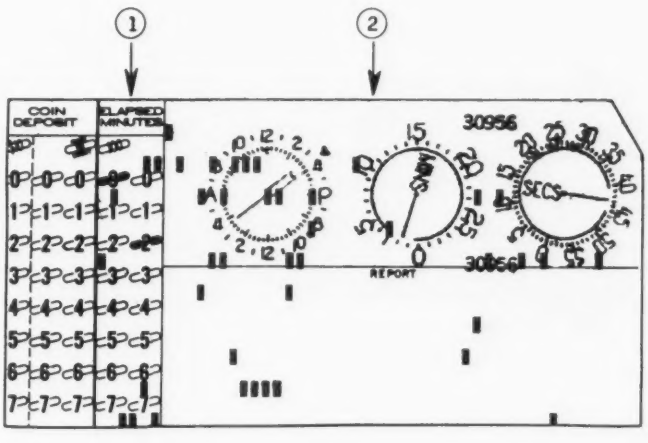
In this service the using customer, say a doctor, carries a radio receiver about the size of a pack of cigarettes in his pocket. If his office has an important message for him, they contact the mobile operator. Over a highway mobile radio channel allocated for the purpose the mobile operator dials a four digit code assigned the doctor. This transmits a signal to the doctor's radio receiver only. When he hears this signal he goes to the nearest telephone and calls his office. Problems such as receiver not working in certain buildings and almost all elevators, and transmission being cut down by buildings, must still be solved.

Money Savers

NOW A WORD about things traffic forces may be doing in the future to save money in another part of the company even though no appreciable savings may be realized within the Traffic Department and the service may not be made any faster.

One of these is the "Mark Sensing"

BACK OF MARK-SENSED TOLL TICKET
AFTER TICKET CUT BY ACCOUNTING



1. Elapsed minutes - 2 (02). This information is mark-sensed by Accounting.

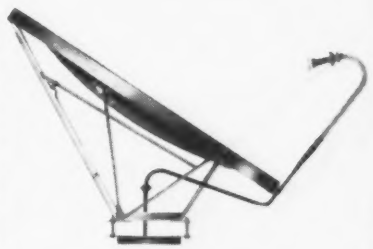
   Note: If the call is 8 or 9 minutes or if the length of time involves these two digits (e.g. - 18 minutes or 29 minutes) the elapsed time is not available from these columns. Both the 8 and 9 are lost when the card is cut. Refer to the calculagraph stamp for elapsed time.

2. Calculagraph stamp.

FIGURE FIVE: — Back of mark sensed toll ticket after ticket cut by Accounting.

another reason for Collins microwave

Offset feed Antenna



The antenna employed in Collins systems eliminates the mismatch problems inherent in standard paraboloids.

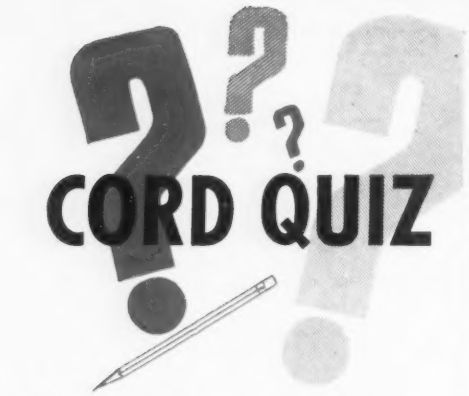
Its configuration greatly reduces the reflection of energy back to the feed, and there are no critical dimensions from horn to dish which, in conventional antennas, might be altered by water or other precipitation.

The design also reduces undesirable sidelobe radiation and lends itself to easy adjustment.

This is another progressive feature of the most advanced microwave system available. For detailed information, write Collins Radio Company, Sales Service, 1930 Hi Line Drive, Dallas, Texas.

COLLINS

CREATIVE LEADER IN COMMUNICATION



Ask yourself these questions—and the answer you get will be an emphatic "YES" for COMMERCIAL on all counts!

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Do they provide noise-free conductivity?
Will they prove to be economical by providing long, trouble-free service life?
Can we expect prompt deliveries?

When you sum up all these points, don't they add up to about everything you demand of the cords you put into service? Then why not specify COMMERCIAL CORDS the next time you order. An "on-the-job" service test will provide convincing proof. You can now get Instrument Cords in color too!

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QUALITY CORDS FOR ALL MAKES AND TYPES OF TELEPHONE INSTRUMENTS

of toll tickets. While mark sensing is just now being tried in field experiments by the Bell System, it has been used by the Lorain Telephone Co. and the Elyria Telephone Co. in Ohio for some time.

As Automatic message accounting is placed in use and a company bills many of these tickets prepared by the machine probably on a punch card, the problem of fitting the remaining manually prepared tickets into the machine billing of the mechanized tickets become important.

The Accounting and Commercial Departments possibly would realize savings in subscriber billing if the entire operation could be mechanized, using equipment also used in other accounting functions. Mark-sensed toll tickets are simply tickets which can be integrated into the mechanical billing operation but are prepared manually by the operator.

Figure One shows a sample of a blank toll ticket on a card approximately 7¼" x 3¼". A part of the required ticket details must still be made by written entry by the operator, but a good share of the information is entered by pencil strokes in the appropriate enclosure. As seen in *Figure Two* the entry spaces on the toll ticket can be arranged to suit different specific requirements. *Figure Three* shows a blank sample ticket as used by the Bell System. *Figures Four* and *Five* show the front of a ticket for a collect call after ticket has been interpreted and cut by accounting and the back of a mark-sensed toll ticket after ticket has been cut by accounting.

A newer means of actually punching the card at toll positions rather than mark sensing it has just been developed by one of the companies in this field. This is a holder for the blank punch cards which provides a plastic top with holes in it at appropriate places. The operator instead of mark sensing with a special pencil uses a tool resembling a mechanical pencil to actually punch the card at the position.

It is expected that this will be more exact than mark sensing since sometimes the mark is not in the exact spot needed or is not heavy enough to be acceptable to the accounting people. Further, it eliminates the preliminary writing of some data thus speeding the data processing job and reduces chance for error. Whether the operator work time in preparing the punch card will be greater for either mark sensing or punching cards than it is at present must be determined. Tests on mark sensing are now being made by the Bell System in Pottstown, Pennsylvania, and Woonsocket, Rhode Island.

This article is a collection of ideas of many people in the telephone industry for saving time and money in handling message traffic, the main service the industry has to sell. If it stimulates any reader enough to bring forth just one idea which can be used by the industry to save time or money, it will have served its purpose. — *Jack C. Cluen.*

Charles E. Taylor Dies

CHARLES EDMUND TAYLOR, 84, secretary-treasurer of the Columbia (Pa.) Telephone Co. died at his home on August 21, after an illness of six weeks.

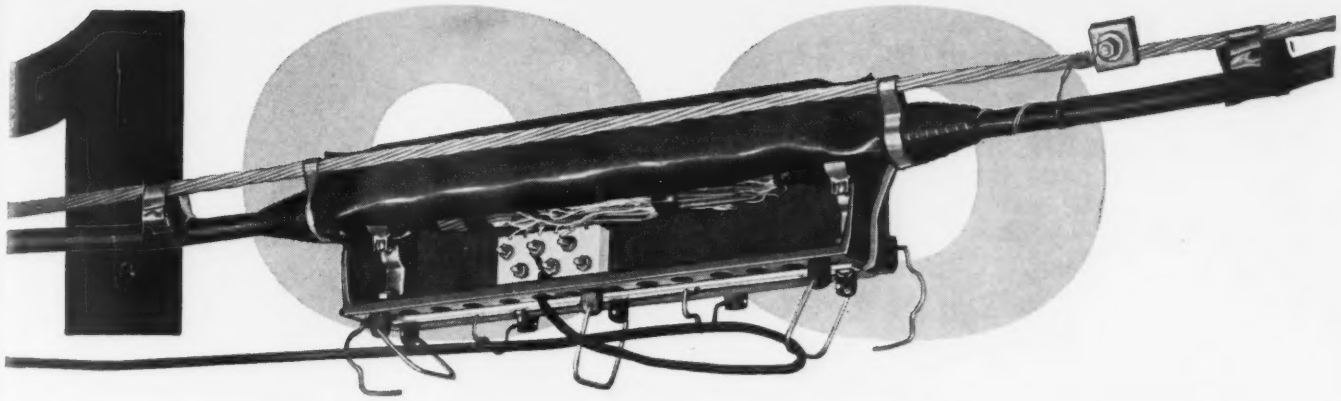
Born in Columbia, October 10, 1873, he was a son of the late Dr. William Gardiner and Vema Peters Taylor.

Mr. Taylor resided in Columbia his entire life and as a young man became affiliated with the Columbia Telephone Co. where he was serving as a director and secretary-treasurer at the time of his death. He held the latter position since 1904. For many years he served in a similar capacity with the Schwarzenbach-Huber Silk Co.

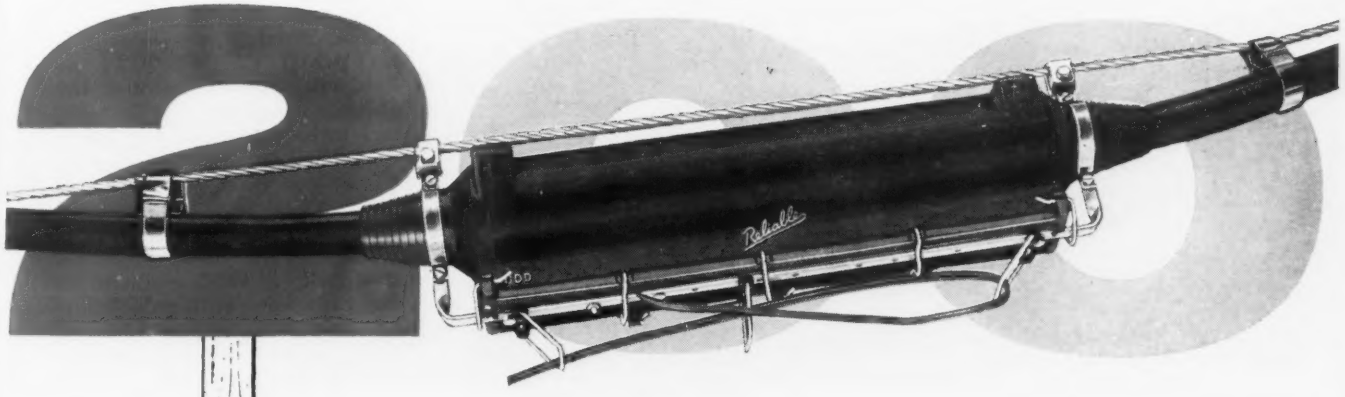
An ardent Republican he was active in his party's affairs and from 1923 until 1934 he served as postmaster in Columbia. Earlier in life he served as county prothonotary, filling an unexpired term of his father who died in 1904 while serving in that office.

He is remembered by his contemporaries as a musician, being a skilled pianist who was called upon to play at many social functions and church affairs.

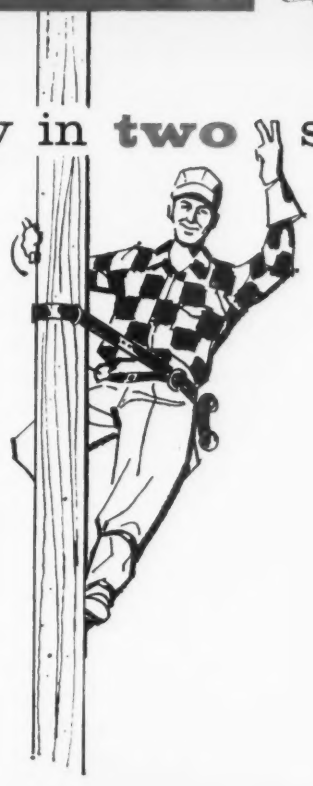
The last of his immediate family, he is survived by his widow, two nieces and a nephew.



Reliable ready-access terminals . . .



now in **two** sizes for cables up to 2.2″ in diameter



Reliable now offers Ready-Access Cable Terminals in two sizes for use with plastic jacketed, plastic insulated cables.

Catalog Series 100 – for cable up to 1.2″ O.D.

Catalog Series 200 – for cable from 1.0″ to 2.2″ O.D.

Catalog Series 100 and 200 units are easily installed and easily maintained terminal and splicing facilities. Up to four 6-pair Reliable Catalog No. 105 Terminal Blocks can be added to both Series Terminals, or the space can be used for loading coils. The flexible neoprene cover is conveniently folded back, as in upper illustration, while internal wiring is altered to meet changing requirements.

You will get interesting details by writing for Product Data Sheet No. 17, featuring Ready-Access Cable Terminals.

Reliable

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Old Lincoln Highway at Pa. Turnpike, Trevose, Pa.

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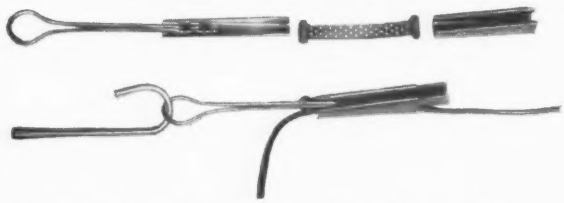
- Cable Benders
- Cable Blocks
- Cable Lashers
- Coaxial Cable Tools
- Lashing Wire Clamps and Grips
- Portable & Power Reels

DROP WIRE CLAMPS



#7380 Type B Drop Wire Clamp consisting of three piece unit, constructed of aluminum with stainless steel bail and designed to hold a large selection of size and style of wires without harm to the outside covering due to the unique wedge action. Packaged 25 per carton with 20 cartons per standard package. 500 Wt. 27 lbs.

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Over 450 various items of Line Construction Tools, Maintenance & Pressure-Testing Equipment in stock for immediate Shipment

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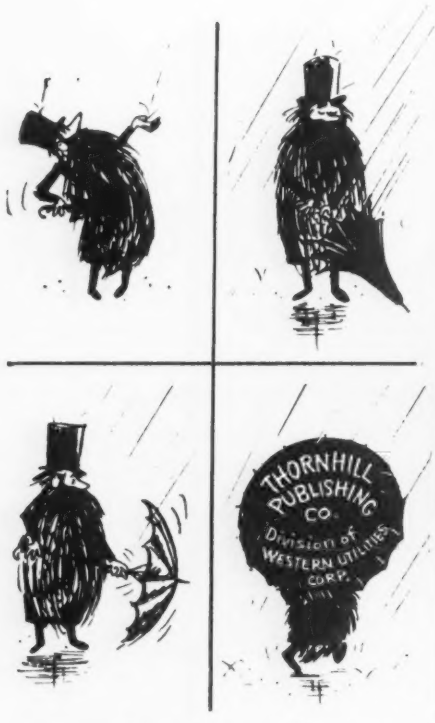
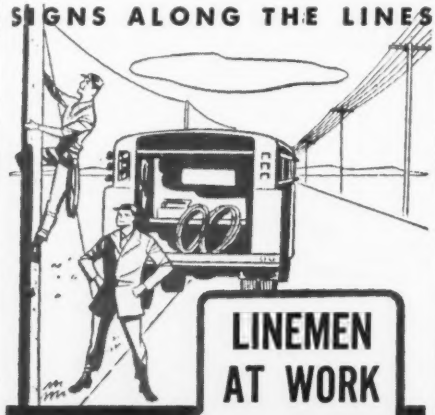
SPECIALIZED COMMUNICATIONS EQUIPMENT SINCE 1918



A complete telephone directory publishing service

300 MONTGOMERY ST., SAN FRANCISCO, CALIF.
OFFICES: EVERETT, WASHINGTON - KILGORE, TEXAS
COOS BAY, OREGON - BEAVERTON, OREGON

SIGNS ALONG THE LINES



LINEMEN AT WORK
USING
Crapo GALVANIZED
GUY & MESSENGER STRAND

Positive strength and durability economies, combined with the superior qualities of steel, make Crapo Galvanized Steel Strand a rugged performer. The heavy, ductile, tightly-adherent galvanized coating — applied by the famous Crapo Process — provides dependable protection for the steel, prolongs the expectant life of the strand. There is a size and grade of Crapo Galvanized Strand for every practical need.

INDIANA
STEEL & WIRE COMPANY, INC.
Muncie, Indiana

WHITNEY BLAKE CO., New Haven, Conn., has appointed RAYMOND C. CAMPBELL as field sales representative in the Chicago area. Campbell's territory includes the cities of Green Bay, Madison, Milwaukee, Davenport and Peoria. He will also assist Charles G. Cumpstone, Whitney Blake telephone sales manager, in the Chicago office. Campbell, a 1951 graduate of the University of Rhode Island has had previous experience in wire manufacturing in Production and Sales.

Robert Novakowski Joins Henkels & McCoy

ROBERT NOVAKOWSKI has been appointed as superintendent of central office apparatus installation and service by Henkels & McCoy.

According to R. B. Wiseman, manager of systems engineering and installation, Mr. Novakowski headquarters at the Elkhart, Ind. office of the company. His duties will include selection, training and supervision of technical personnel as well as technical consultation with customers regarding installation, modifications and additions of equipment.

Novakowski has had wide experience in the circuit design, installation and maintenance of step-by-step, relay and crossbar types of central office equipment. He has had special training in methods for determining quality of service rendered by central office equipment and design to minimize faults as well as improved methods for locating troubles.

He has previously worked for North Electric, Automatic Electric and with the Signal Branch of the Air Force.

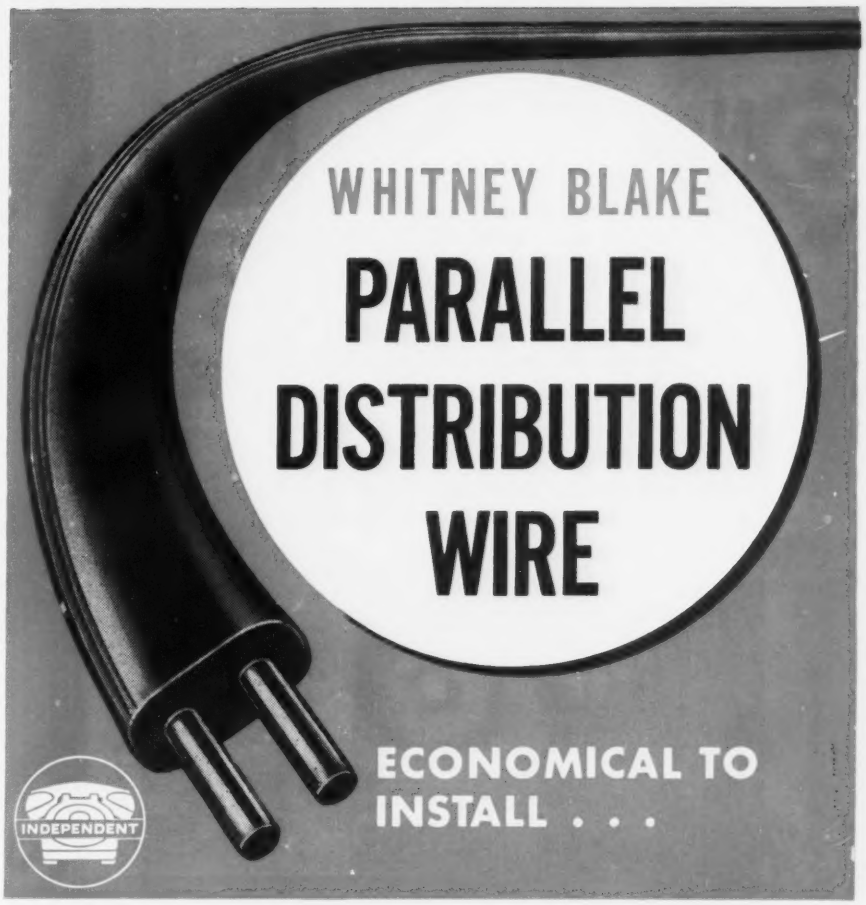
Taylor Named Sales Mgr. Exide Branch in Chicago

EVANS TAYLOR, former sales engineering manager of Exide Industrial Division, The Electric Storage Battery Co., has become branch sales manager of Exide's Chicago area. He succeeds Cecil W. Wilson who retired in September after more than 43 years' service.

Taylor, who transferred in July to the Chicago branch as sales manager designate, will assume responsibility for industrial battery sales and service in the area which includes northern Illinois, Indiana, eastern Iowa, eastern Wisconsin and the northern Michigan peninsula.

He began his career with Exide in 1936 in the development and design division of the engineering department. In 1940, he became a field engineer, specializing in submarine battery installations. Promoted in 1946, Taylor served for six years as market supervisor for railway and motive power sales. He transferred in 1952 to the Philadelphia branch as a sales engineer. In 1955, he was appointed sales engineering manager at national headquarters.

WILLIAM S. GAGE, manager supply sales, has been assigned the additional duties of manager, marketing services division, Automatic Electric Sales Corp. The announcement was made by D. H. Deaver, sales corporation president, who said Gage's new duties would include general administrative supervision of sales promotion, marketing research, sales training, and related activities.

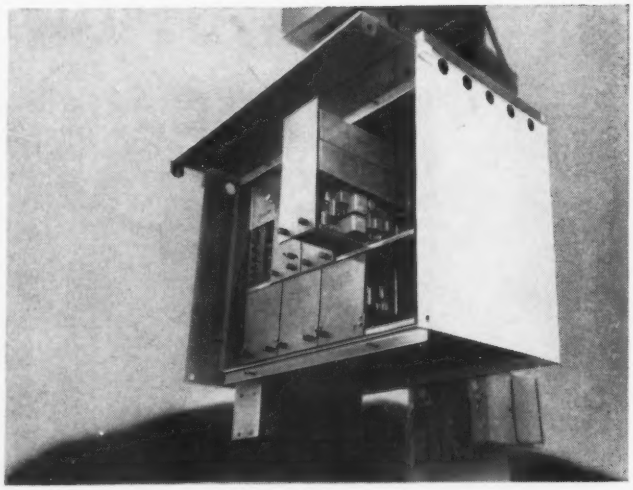


A minimum of labor is involved in installing WB Parallel Distribution Wire. It is ideally suited for long span construction. The high molecular weight polyethylene jacket is unaffected by adverse atmospheric conditions and also protects against transmission interference caused by tree branches, kite strings and other foreign objects falling across open wires.

WB Parallel Distribution Wire is made to the same high standards of quality that have maintained Whitney Blake leadership in the Independent Telephone Industry.

New Kellogg K-31 Carrier System

Ideal for Rural Subscribers



Kellogg's new K-31 rural subscriber carrier system provides telephone companies with toll quality subscriber carrier at low cost. The system is completely transistorized, features printed circuits, miniaturized sub-assemblies and plug-in construction.

Standby power, consisting of two small batteries and a transistorized charger in a pole-mounted housing, is available. This is possible because power consumption is less than three watts even during talking.

K-31 has built-in compandors to assure quiet talking circuits and is automatically regulated to eliminate the effect of changing weather conditions over a wide range of carrier line losses.

Line-up and test procedure is very simple—a single level control for each direction of transmission. Terminating telephone type jacks are provided for ease and speed in testing. Installation time is held to a minimum by the use of a unique pole-mounted housing with built-in protected terminal blocks for external connections.

These design features plus top quality components and workmanship make K-31 reliable and stable in its operation.

Ask your Kellogg sales representative for full details.

KELLOGG Communications Division of IT&T
CHICAGO, ILLINOIS

Kellogg Switchboard and Supply Company, 6650 South Cicero Avenue, Chicago 38, Illinois. Communications Division of International Telephone and Telegraph Corporation.
Regional Offices and Warehouses: See two-page Kellogg advertisement pages 36-37 for complete listing.

JAMES L. GREENE has been appointed office manager of the Stromberg-Carlson Telecommunication Branch Sales Office in Burlingame, Calif. In his new post Greene will be concerned with internal management of the branch sales office, under direction of J. P. Galligan, branch manager. Greene joined Stromberg-Carlson in June, 1957, after graduation from the University of Notre Dame, where he earned a B S degree in Commerce. At that time he was placed in the Telecommunication Division management training program, and later was made sales branch office trainee. Greene is no stranger to the telephone industry, and comes from a long line of telephone pioneers.

Elyria Telephone Advances Mudrak & Brenning

JOHN MUDRAK, plant superintendent of The Elyria (Ohio) Telephone Company, has been appointed

JOHN MUDRAK

FREDERICK K. BRENNING

chief engineer. Frederick K. Brenning, of the company's construction forces was named to succeed him. In announcing the organization change, Weldon W. Case, president and general manager, said the need for long range planning made it desirable to fill the engineering post which has been vacant for some time.

The new plant superintendent has been with the company since March, 1956. He started his telephone career in the plant department of The Ohio Bell Telephone Co. at Cleveland in 1946 after his return from military service in World War II. He served with the 787th Field Artillery in the European theatre from 1943 to 1945, having been a sergeant when discharged.

Mudrak's first connection with the telephone industry was in the Elyria company's engineering department, which he joined after his discharge from military service in 1946. After filling various positions, he went to the engineering department of The Citizens' Independent Telephone Co. of Terre Haute, Ind., in 1953. He returned to the Elyria Company in November, 1955, to resume work in the engineering department.

General of Pa. Names Zimmerman Plant Mgr.

DWIGHT E. ZIMMERMAN, general plant engineer at General Telephone Co. of Pennsylvania, has been appointed general plant manager.

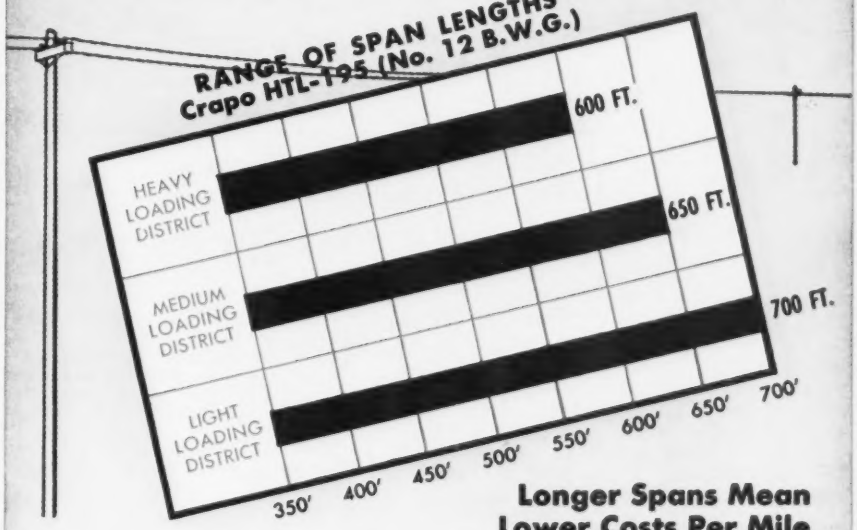
Zimmerman began his employment

Crapo

HTL-195

FOR EXTRA LONG SPAN RURAL LINES

The *NEW LOWER* Resistance Extra-High Tensile Line Wire



Longer Spans Mean Lower Costs Per Mile

You can cut the number of pole structures to a minimum when you use **Crapo** HTL-195 in building rural telephone lines. Extra long span construction, made possible by the high physical strength of this new wire, means marked savings in material and installation costs.

The voice transmission quality of **Crapo** HTL-195 is equal to that of **Crapo** HTL-135 and superior to older grades of ferrous wire.

Pertinent technical data have been prepared to assist engineers in designing and building extra long span lines with **Crapo** HTL-195.

WRITE TODAY for FREE COPY of the CRAPO HTL-195 "Manual of Engineering Data" No. A-195

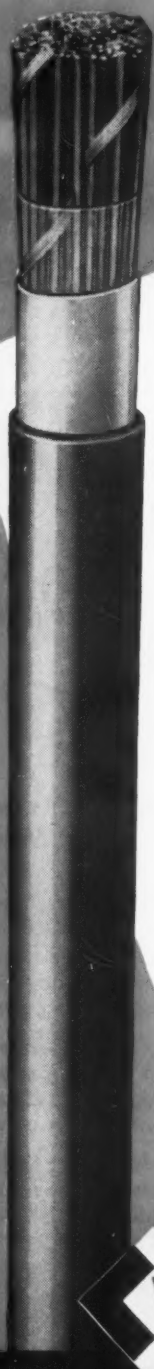
INDIANA STEEL & WIRE COMPANY, INC.
MUNCIE, INDIANA

FOR TODAY'S *and* TOMORROW'S NEEDS

WHITNEY BLAKE

FULLY COLOR-CODED TELECABLE®

EXCHANGE AREA CABLE



Simplify your cable splicing and terminal installation by asking for the new fully color-coded Whitney Blake TELECABLE . . . it offers the same high quality that has made TELECABLE a recognized leader in the independent telephone industry. An 8 mil aluminum shield applied longitudinally replaces the 4 mil spiralled shield formerly used on all popular sizes. Manufactured in accordance with REA specification PE-22.

Quality is remembered long after price is forgotten.

INDEPENDENT

WB

8-8

WELL BUILT WIRES SINCE 1899

WHITNEY BLAKE COMPANY

NEW HAVEN 14, CONNECTICUT

with the company in October, 1949 as fieldman in the engineering department. In November 1950, he was promoted to outside plant engineer assistant, and in 1952 was made outside plant engineer, a position held until May of 1956 when he advanced to division plant engineer, and in September of the same year was promoted to general plant engineer.

Zimmerman succeeds William C. Rowland, who has been named operating vice president of General Telephone Co. of Wisconsin.

Horton to New Post At Gen. Tel. Co. of Wisc.

GAYLORD E. HORTON, former administrative assistant for General Telephone Co. of Michigan has assumed the position of vice-president in charge of Revenue Requirements of General Telephone Co. of Wisconsin at Madison.

Horton, who has been with the company since 1941, began his career as a commercial clerk at Owosso.

HAROLD E. CAIN, for 11 years connected with the Warren (Ohio) Telephone Co., has been appointed comptroller of The Western Reserve Telephone Co., Hudson, Ohio a newly created position. Cain will be responsible for the company's accounting functions. While with the Warren Telephone Company, Cain held a variety of administrative and executive posts in the accounting and commercial departments. These included general auditor, treasurer and commercial superintendent. Recently he was commercial superintendent of The Inter-County Telephone Co., Fort Myers, Fla.

Professional Services

ALLEN KANDER AND COMPANY

NEGOTIATORS FOR THE PURCHASE, SALE AND FINANCING OF INDEPENDENT TELEPHONE COMPANIES

WASHINGTON
1625 Eye Street, N.W.
NAtional 8-1990
NEW YORK
60 East 42nd Street
MUrray Hill 7-4242
CHICAGO
35 East Wacker Drive
RAndolph 6-6760
DENVER
1700 Broadway
AComa 2-3623

JAY G. MITCHELL

CONSULTING ENGINEER
APPRAISALS—COST—PLANT
7720 SHERIDAN ROAD CHICAGO
FOR MAIL BOX 523 EVANSTON, ILLINOIS

DIAL REBUILDING

Telephone Repair & Supply Co.
1760 W. Lunt Avenue, Chicago 26, Ill.

Construction Crews Station Installers
Central Office Installations
Cable Splicers Complete Engineering

HENKELS & McCOY

6100 N. 20th Street Philadelphia, Pa.
Now Operating in 30 States
OFFICES LOCATED AT

Elkhart, Ind.	Tel. 2-5650
Ashland, Ohio	Tel. 3-7543
St. Johns, Mich.	Tel. 966
Bloomington, Ill.	Tel. 6-1850
Schofield, Wisc.	Tel. 9-2542
Ocala, Fla.	Tel. Marion 9-1284

PERFORMANCE Has Built Our Business

EVERYTHING

In Telephone Printing
SUTTLE EQUIPMENT CORP.
LAWRENCEVILLE, ILL. PHONE: 782

INSPECTION SERVICE

"AT TIMBER TREATING PLANTS"
Of poles, crossarms, and preservative treatments. Analysis of wood preservatives
Consultation and specification writing.
A. W. WILLIAMS INSPECTION CO., INC.
MOBILE, ALABAMA
New York St. Louis Portland
Inspectors stationed throughout the U.S.A.

Communication Equipment Installation
Maintenance Modifications — Additions
Buy — Sell — Trade
Any Make — Type

Midwest Communications Service Co.

P.O. Box 3008 Tel. SW 9-4311
Lubbock, Texas

NEALE CONSTRUCTION CO.

ENGINEERING • CONSTRUCTION • MAINTENANCE
TOPEKA, KANSAS PHONE 4-2621

Davis Construction Co.

UTILITY PLANT CONSTRUCTION
45 North Clark Street • Sullivan, Missouri

McGRATH ENGINEERING, INC.

Consulting Engineers
209 West 6th Street
TOPEKA, KANSAS
Telephone CEntral 2-2358

HARRIS-McBURNEY CO.

PUBLIC UTILITY CONSTRUCTION
A complete construction service for the telephone industry
Construction Crews Engineering
Station Installers Appraisals & Reports
Cable Splicers C. O. Installation
Underground Duct Systems
Telephone ST 4-6126
P. O. ox 267 Jackson, Michigan

Installation Specialists COMMUNI-CATERING

All Makes
P. O. Box 6712
CHICAGO 7, ILLINOIS
CENTRAL OFFICES
Installed-Modified-Removed

CARL C. CRANE, INC.

Consulting Engineers
2702 Monroe Street, Madison 5, Wis.
Telephone CEDAR 3-4210

Reach The Top!

Your card in the "Professional Services" Department of "Telephone Engineer & Management" will bring your services to the attention of the men who specify and order the services, equipment, materials and supplies needed by

4,273 Telephone Companies
21,439 Central Offices
17,770 Exchanges

BE CONVINCED —
send your advertisement
TODAY!

TELEPHONE ENGINEER and MANAGEMENT

7720 N. Sheridan Rd.
Chicago 26, Ill.

HELP WANTED

CABLE SPLICERS. Station Installers, equipment Installers. Linemen, Experienced men needed. Steady work, good pay. Henkels & McCoy, 1800 Johnson Street, Elkhart, Indiana, or 6100 N. 20th St., Philadelphia, Pa.

MAN WANTED: Capable of assuming duties of plant engineer and superintendent of telephone company consisting of nine exchanges with forty-five hundred stations. Must have extensive experience in all plant operations inside and outside. Reply Box 30, c/o Telephone Engineer & Mgmt.

WANTED: Well qualified cable splicers and helpers. Write: Neale Construction Company, 3100 Topeka Ave., Topeka, Kan.

SITUATION WANTED

TELEPHONE ENGINEER — College graduate, 9 years experience Western Electric 1½ years experience project engineer, missile test range. Desire southeast location. Will furnish resume on request. Write Box 34, c/o Tel. Engr. & Mgmt.

COLLEGE GRADUATE, fifteen years experience in plant, C.O. dial installation and management, desires to relocate. Prefer position as plant superintendent or manager. Write Box 28, c/o Telephone Engineer & Management.

FOR SALE

MAGNETO TELEPHONES — Leich 901 wall or desk magneto telephones. Cleaned, tested and guaranteed. $16.50 each. As removed from service, $15.00 each. Turtle Lake Tel. Co., Turtle Lake, Wisc.

USED SWITHBOARD: 100 line Kellogg Relaymatic Switchboard. Now in use, available February 1959. Glandorf Telephone Co., Inc., Glandorf, Ohio.

SWITCHBOARD—North Electric MCXR-1000 Serial No. 200G Switchboard; used 4 years, 400 lines, 11 links per group, 3 PBX groups, 10 paystation lines, 5 outgoing and 4 incoming FS trunks, 9 two-way toll trunks. Available immediately. Can be seen any time at Home Telephone Company, Simpsonville, South Carolina, R. D. Coker, Mgr., WOrth 3-4400.

Now. Pay out take up wire REELS for Line and Service wire,
For Only $29.50

Whitaker Reel Mfg. Co. Inc.
MONROE, LOUISIANA
Since 1938

CLASSIFIED ADS
Published in each issue of Telephone Engineer & Management. Forms close on 10th of month for issue dated the 1st, and 25th of month for issued dated 15th. Rates are 15¢ per word except for Situation Wanted ads, which are 10¢ per word.

CABLE PLOWING DON'T INVEST

Hire — 1 — of our Plows
— 1 — or More of our Men
TODAY Call or Write
To:

U. S. CABLE CONSTRUCTORS, INC.
2002 E. Wisc. Ave., P. O. Box 378
REgent 4-9881
Appleton, Wisconsin

BIG SAVINGS!
#10 HEMINGRAY GLASS INSULATORS. Brand New, Export packed. Per 1050. **$21.50**
Only.....
(lots of 5000 or more $18.75 ths.)
prices f.o.b. Sacramento
LORIS SALES P.O.Box 1896-E 907—2nd St. Sacramento, Cal.

RECLAIMED SLIGHTLY USED WIRE
DISTRIBUTION — 6-pair #19 Copper solid, Color Coded. With heavy support wire, 300 or more feet per run. — Few splices per coil @ 7 cents per foot.
DISTRIBUTION, SAME AS ABOVE, (BLACK, NOT COLOR CODED) @ $55.00 per M. Ft.
DROP WIRE. NEOPRENE, COPPER WELD CONDUCTORS, 90 or more Feet per run. Each run separate coiled, @ $11.00 Per M. Ft.
QUOTATION,
F. O. B. CHICAGO, ILL.
INDEPENDENT TELEPHONE REPAIR CO.
2137 West 21st St. Chicago 8, Ill.
LAfayette 3-5439

DECALS
Made for trucks and equipment
Small or large quantities
Write for free catalog.
MATHEWS COMPANY
827 S. Harvey Oak Park, Ill.

WANTED
Retired telephones and accessories, any quantities and makes
BOHNSACK EQUIPMENT CO.
GERMANTOWN, NEW YORK

Magneto Switchboards & Parts

Stromberg Carlson # 105 Magneto Switchboard complete with 135 lines, 15 trunks and 15 repeat coil type cord circuits. Equipped with #350-B keys having double supervision on key shelf.

S.C. #11-A Combined drops & jacks (5 per) on #140 mounting
S.C. #350-B Keys with supervisory drops
S.C. #13-A Repeating Coils
S.C. #19 Condensers 2MF
S.C. #1248 Magneto Desk Telephones

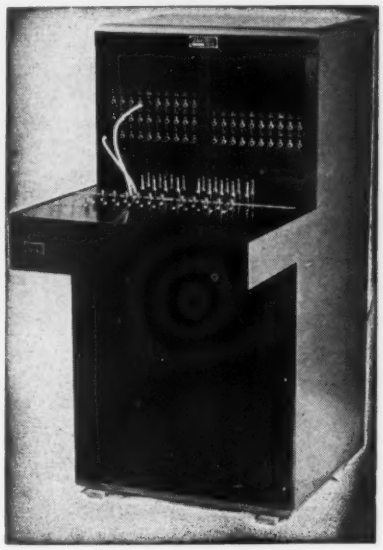
(Limited Quantities so Call or Write Soon!)

Whatever Your Needs . . . . . It Pays to Call

BUCKEYE TELEPHONE & SUPPLY CO.

P. O. Box 5707 1250 Kinnear Rd. HUdson 8-0655 Columbus 21, O.

Magneto



TELEPHONES

(completely reconditioned)

Western Electric #302 with F-1 handset, 5-H dial Ringers: St. line, Synchromonic 16, 30, 42, 54, 66 cycle—Ready for service—immediate delivery $12.50

#302, as above, equipped with F-4 handset with T-1 transmitter — U-1 receiver (500 type) $15.00

#302, as above, but blanked for dial (F-1) $10.00

A.E. type 40, St. line, 16, 30, 42, 54, 66 cycle ringers, with #24 or later type dial (fully reconditioned) $12.50

(coiled handset cords, add 50 cents)

Switchboard Supplies, jack & lamp strips, relays, cords & plugs, cord & trunk equipment, rep coils. New & Good Used — Huge Savings

SWITCHBOARDS — NEW

Stromberg Carlson — *$1000 Value*

New 100 line—50 equipped with combined drops & jacks, wired to 15' 51 pr. braid cable stub—Night alarm ckt. (no code alarm) 10 cord circuits (single supervised) with repeating coils. Standard-low type, 30" cordshelf (desk height) built for Navy—never used—Hardwood (birch or maple) cabinet, painted green.

Clean as a whistle—tested—

fully guaranteed $295

Prints on request.

PBX SWITCHBOARDS

W.E. 551 A, 40 line, rebuilt like new $400
550 B, 80 line, rebuilt like new $500
506 7 line, rebuilt like new $100
506 B, 12 line, rebuilt like new $150
605 B, 3-positions, like new, write—
Kellogg, K-100, 3-positions, new, A-1.... $500
Stromberg-Carlson #106, 80 line, rebuilt $400

PLAN TO CONVERT Magneto to Dial

Start now by using CB phones in town — one of these coils connected to each drop, thru condenser to common battery will provide CB service on that line.

KELLOGG

C-111

Subscriber signals operator by lifting handset and rings off by restoring it.

New $2.50

Used—A-1 ..... $1.50

Mounting—
10 coil for
19" rack $2.50

Condensers for use with above 75c each.

Shipped on Approval—Satisfaction guaranteed

1218 Venice Blvd. TELECTRIC CO. Richmond 8-2249
Los Angeles 6, Calif.

Whether a Winch Line Hook or a complete Line Body check your requirements with

UTILITY TOOL & BODY CO.
CLINTONVILLE, WISCONSIN

CABLE SHEATH STRIPPER

N-2878

• HANDY • FAST • SAFE • EFFICIENT • EASY TO USE

Slits plastic or fabric covered cable. Rigid Phenolic Handle. Stainless steel saddle holds guide and blade in place. Groove guides and supports cable. 2 extra blades.

$7.80 each IMMEDIATE DELIVERY

P. K. NEUSES, INC.
511 N. Dwyer St., Arlington Heights, Ill.

ADVERTISING, DIRECTORIES — *General Telephone Directory Co., 1800 Oakton Street, Des Plaines, Ill.*

BELTS — CLIMBERS — COMPLETE LINEMEN'S EQUIPMENT, *W. M. Bashlin Co., Bashlin Bldg., Grove City 1, Pa.*

BOOTHS — Acoustic Telephones — *Sherron Metallic Corp., 1202 Flushing Ave., Brooklyn 6, N. Y.*

BORING MACHINES, EARTH — *Highway Trailer Co., Edgerton, Wisc.*

CORDS, Switchboard (with or without plugs), Instrument (straight and retractable in eleven colors. — *Commercial Cord Co., Inc., 26 Main St., Clifton Springs, N. Y.*

CORDS, Switchboard & Telephone — *Runzel Cord & Wire Co., 4727-31 Montrose Ave., Chicago 41, Ill.*

POLES, Creosote & Creosote Penta-Treated, Southern Yellow Pine — *Piedmont Wood Preserving Co., P O. Box 700, Augusta, Georgia.*

POLES, Southern Yellow Pine — *Taylor Colquitt Company, 217 E. Main St., Spartanburgh, S. C.*

POLES, Southern Yellow Pine — *Texas Creosoting Co., Orange, Texas.*

PROTECTIVE EQUIPMENT — *Reliable Electric Company, 11333 Addison St., Franklin Park, Ill.*

TELEPHONE EQUIPMENT AND SUPPLIES — *Telephone Repair & Supply Company, 1760 Lunt Avenue, Chicago 26, Ill.*

WIRE, Insulated — DATED DROP WIRE — Neoprene or Weatherproof — *Alphaduct Wire & Cable Co., New Brunswick, N. J.*

WIRE, Insulated Drop and Bronze or Copperweld — *Acorn Insulated Wire Co., Inc., 36 Freeman St., Pawtucket, R. I.*

THIS group attended Collins Radio Co.'s recent Division Sales Meeting at Richardson, Texas. From left to right are: P. G. FORSYTHE, Dallas; R. L. HALVORSON, Denver; J. O. FORDHAM, San Francisco; R. S. WILLARD, Dallas; F. FARQUHAR, New York; J. B. MATHIS, Dallas; C. W. SERVICE, Dallas; J. H. HAMILTON, Dallas; J. H. BIRCHFIELD, Dallas; A. K. URSCHEL, Dallas; (Rear Standing) J. A. DOLSEN, Ft. Wayne; H. E. SOLEM, Tallahassee; (Seated) A. D. M. SPOHN, Dallas; L. W. PROCTOR, Strawberry Point, Ia.; (Rear Standing) E. A. JENKINS, Dallas; R. I. HANCOCK, Cedar Rapids; (Front Seated) O. I. THOMPSON, Dallas; (Rear Standing) D. J. G. JOHNSON, Miami; E. M. MARTIN, Dallas; E. H. EDGE, Toronto; C. CARNEY, Cedar Rapids. The picture was taken with a background of Collins frequency diversity equipment (specially designed for telephone company application) in Collins' new building at 1200 Alma Road, Richardson, Texas. Although the sales staff is based in the new building, the company's mailing address will continue to be 1930 Hi-Line Drive, Dallas 2, Texas.

Southern Nevada Promotes Thomas and Geary

TWO VICE PRESIDENTS have been appointed for the Southern Nevada Telephone Co., Las Vegas, according to H. G. O. Weiler, president.

Gilbert O. Thomas, secretary and controller, and Walter T. Geary, general operations manager, were elevated to the vice president posts.

Thomas, formerly assistant chief accountant of the Public Service Commission of the State of Washington, is a member of the Washington Society of Certified Accountants, and the American Institute of Accountants. He was employed by the First National Bank of Cincinnati for five years prior to service with the Army Medical Department. After three and a half years military service he was released in 1948 and accepted the position with the Washington Public Service Commission as asst. chief accountant. He is a native of Kentucky.

WALTER T. GEARY

Geary was with Western Electric Co., Kearny, N. J., from 1941 to 1948 and then moved to General Telephone Co. at San Angelo, Texas, where he served as chief equipment engineer until 1953. He then joined Kellogg Switchboard & Supply Co. as division field engineer which brought him to Las Vegas when the Southern Nevada Telephone Co. cut over to dial service in 1955. Geary subsequently joined the Southern Nevada Telephone Co. in February of 1958.

GILBERT O. THOMAS

Gen. Tel. Co. of N. W. Appoints Gen. Comml. Mgr.

MARVIN L. Myrick, operating vice president of General Telephone Company of the Northwest, has announced that George M. White, Jr. has been promoted to the position of general commercial manager of the company. He will replace Robert E. Joslin, who was recently appointed Director — Revenue Requirements, Secretary and Treasurer of the firm.

White started working for General Telephone in 1953 at the Wenatchee exchange. Since 1957 he has been general commercial supervisor in the Spokane General Office.

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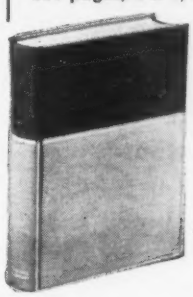

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THE BACK OF THE BOOK

By JOHN G. REYNOLDS

Rough Time For Statistics

ACCORDING to *Arizona Progress*, "Statistics will have a rough time of it in the next few weeks." That is always the case during political campaigns. Politicians have discovered that they can dig up figures to prove almost anything they wish to prove. Economists have known this for a long time. Whether true or false statistics have a very convincing ring to them.

Theoretically you can't argue with a Statistic. One political party may point out that there are X number of people unemployed at present compared with Y number two years ago or five years ago. The trick is to select the proper year (or month) against which to make the comparison.

The other party can simply use a different year (or month) or, better yet, point out that there are now more people employed at higher wages than ever before in the history of the Republic (When the Democrats are talking, our country is called a Democracy.) However, all political parties open their meetings with the "Star Spangled Banner" and beseech the same Diety to bless their supposedly diverse objectives.

Actually political statistics are as suspect as a Soviet olive branch. There is often a "catch," as in the old time riddle about white horses eating more than black horses. On hearing his first political speech, one of our less talkative natives was heard to mutter, "*Big wind, heap dust, no rain.*"

"Cleanest In The World"

ACCORDING to *Long Lines* magazine "One of the smallest businesses in the world thrives in Glendale, Mo., where an elderly gentleman in his 70's has installed an outdoor telephone booth on his property."

What started out originally as a convenience to his neighbors has now become a full-time hobby. The booth not only brings in revenue but its maintenance fills the proprietor's day with activity. He scrubs the floor and washes the glass until they would pass a white glove Army inspection. He also sprays the inside of the booth with perfume.

In commenting on this service the *St. Louis Post-Dispatch* remarked that "it must be the cleanest and most pleasant-smelling telephone booth in this area — if not in the whole world."

Perfectionist

WHEN COLOR telephones were installed in the new offices of the Galveston (Texas) Wharves Company, they keyed the general office color scheme. Even typewriters were painted to match.

So when one official found his yellow telephone clashed with the yellow of sulphur in an oil painting on the wall, he was dismayed. But not for long. He called up his artist mother, asked her to come down and retint her painting to match the telephone.

Modern Homing Pigeon

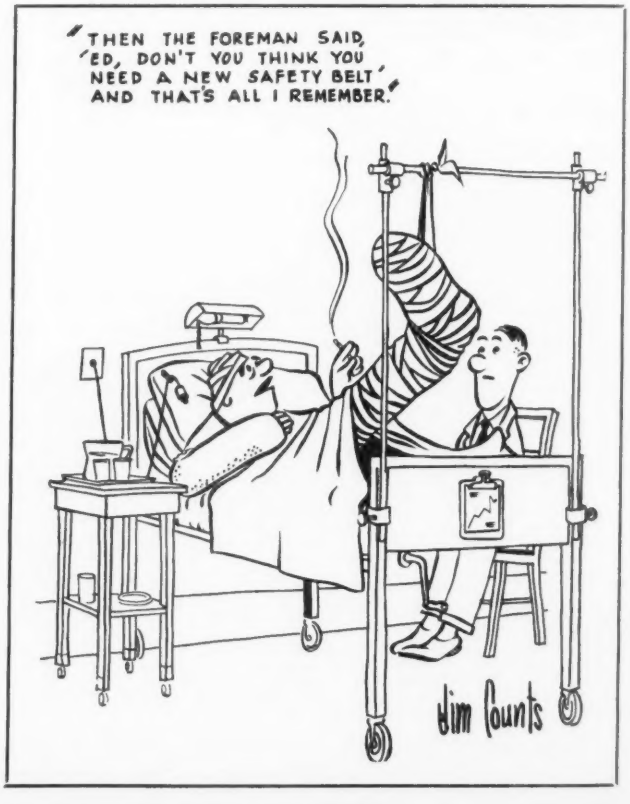
THE *CHRISTIAN Science Monitor* told recently about a lazy parakeet in Kansas City who bummed his way home by telephone.

Having flown about 25 miles to Shawnee, Kan., the bird made friends with a grain company officer (not a bad idea for a hungry bird). But suddenly, he seemed to tire of visiting and requested, "Call Mary Neal Jackson 3-4312." In no time, he found himself back home.

"In The Book"

WE HEAR a Chicago hotel owner had a guest who awakened everyone by screaming "*It's in the phone book! It's in the phone book!*"

The Police found him having a nightmare and awakened him. "*I was having a terrible nightmare,*" he explained. "*I dreamed the income tax people wanted to send me a big refund, but they lost my address.*"



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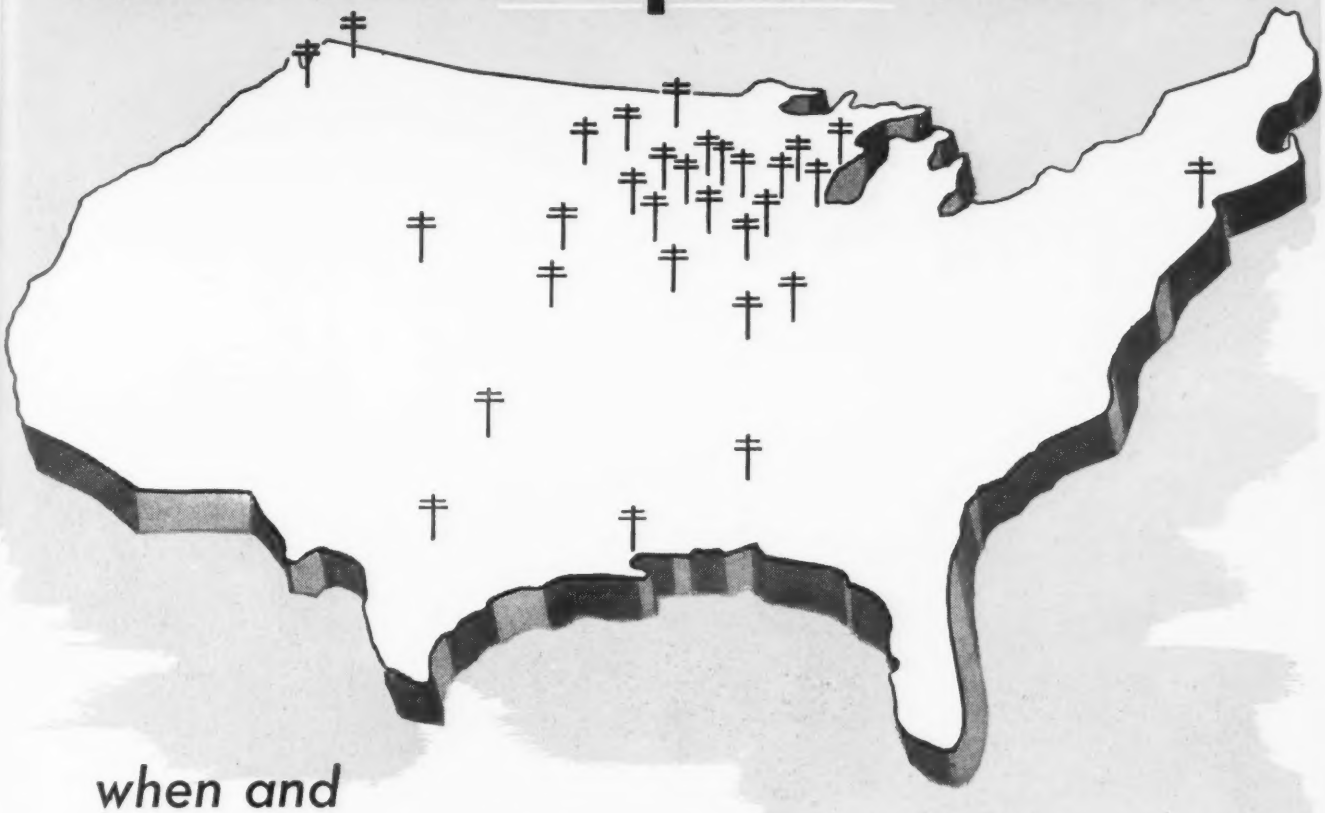

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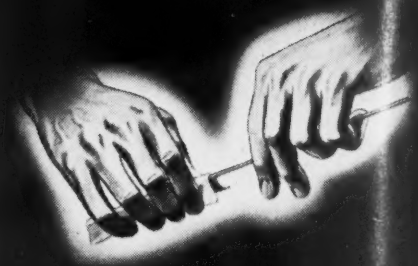

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